THE ENDERLE CENTER REZONE PROJECT

SCH NO. 2024020747

prepared for
City of Tustin
300 Centennial Way
Tustin, CA 92780

prepared with the assistance of
EPD Solutions Inc.,
Irvine, CA 92612
(949) 794-1180

June 2024

Draft Environmental Impact Report

EPD SOLUTIONS, INC

E | P | D SOLUTIONS, INC

3333 Michelson Drive, Suite 500
Irvine, CA 92612
(949) 794-1180
www.epdsolutions.com

Table of Contents

1. Executive Summary 1-1
2. Introduction 2-1
3. Project Description 3-1
4. Environmental Setting 4-1
5. Environmental Impact Analysis 5-1
5.1 Air Quality 5.1-1
5.2 Energy 5.2-1
5.3 Greenhouse Gas Emissions 5.3-1
5.4 Land Use and Planning 5.4-1
5.5 Noise 5.5-1
5.6 Population and Housing 5.6-1
5.7 Public Services 5.7-1
5.8 Recreation 5.8-1
5.9 Transportation 5.9-1
5.10 Tribal Cultural Resources 5.10-1
5.11 Utilities and Service Systems 5.11-1
6. Other CEQA Considerations 6-1
7. Effects Found Not Significant 7-1
8. Alternatives 8-1
9. EIR Preparers and Persons Contacted 9-1

Figures

FIGURE 3-1: REGIONAL LOCATION 3-3
FIGURE 3-2: LOCAL VICINITY 3-5
FIGURE 3-3: AERIAL VIEW 3-7
FIGURE 3-4: EXISTING GENERAL PLAN LAND USE 3-13
FIGURE 3-5: EXISTING ZONING 3-15
FIGURE 3-6: PROPOSED ZONING 3-17
FIGURE 5-1: CUMULATIVE PROJECTS 5-5
FIGURE 5.5-1: NOISE MEASUREMENT LOCATIONS 5.5-9
FIGURE 5.5-2: AIRPORT NOISE CONTOURS 5.5-11
FIGURE 5.9-1: PROJECT CIRCULATION 5.9-7
FIGURE 5.9-2: LOW VMT GENERATING AREA - VMT PER CAPITA 5.9-11
FIGURE 5.9-3: LOW VMT GENERATING AREA - VMT PER EMPLOYEE 5.9-13

Tables

TABLE 1-1: SUMMARY OF IMPACTS 1-5
TABLE 2-1: SUMMARY OF NOP COMMENT LETTERS 2-3
TABLE 3-1: SURROUNDING EXISTING LAND USE AND ZONING DESIGNATIONS 3-9
TABLE 3-2: EXISTING AND PROPOSED PROJECT SITE CHARACTERISTICS 3-10
TABLE 3-3: OPENING YEAR BUILDOUT SUMMARY 3-11
TABLE 4-1: SURROUNDING EXISTING LAND USE AND ZONING DESIGNATIONS 4-2
TABLE 5-1: CUMULATIVE PROJECTS LIST 5-3
TABLE 5.1-1: AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS 5.1-2
TABLE 5.1-2: SOURCES AND HEALTH EFFECTS OF AIR POLLUTANTS 5.1-12
TABLE 5.1-3: AIR QUALITY MONITORING SUMMARY 2020-2022 ..... 5.1-15
TABLE 5.1-4: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN (SCAB) 5.1-17
TABLE 5.1-5: SCAQMD REGIONAL AIR QUALITY THRESHOLDS 5.1-18
TABLE 5.1-6: SCAQMD LOCALIZED SIGNIFICANCE THRESHOLDS 5.1-18
TABLE 5.1-7: TENTATIVE PROJECT CONSTRUCTION SCHEDULE 5.1-23
TABLE 5.1-8: DIESEL CONSTRUCTION EQUIPMENT UTILIZED BY CONSTRUCTION PHASE 5.1-24
TABLE 5.1-9: PROJECT CONSTRUCTION EMISSIONS 5.1-24
TABLE 5.1-10: PROJECT OPERATIONAL EMISSIONS 5.1-25
TABLE 5.1-11: PROJECT LOCALIZED CONSTRUCTION EMISSIONS (LBS/DAY) 5.1-27
TABLE 5.1-12: PROJECT LOCALIZED OPERATIONAL EMISSIONS (LBS/DAY) 5.1-27
TABLE 5.2-1: ENERGY CONSUMPTION ESTIMATES DURING CONSTRUCTION 5.2-7
TABLE 5.2-2: ENERGY CONSUMPTION ESTIMATES DURING OPERATION 5.2-7
TABLE 5.3-1: GREENHOUSE GAS EMISSIONS (MT/YR) 5.3-12
TABLE 5.4-1: PROJECT CONSISTENCY WITH 2020 SCAG CONNECT SOCAL REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY POLICIES 5.4-15
TABLE 5.4-2: PROJECT CONSISTENCY WITH 2024 SCAG CONNECT SOCAL REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY POLICIES 5.4-18
TABLE 5.4-3: PROJECT CONSISTENCY WITH RELEVANT GENERAL PLAN GOALS, POLICIES, AND OBJECTIVES 5.4-22
TABLE 5.5-1: VIBRATION SCREENING STANDARDS 5.5-3
TABLE 5.5-2: CITY OF TUSTIN GENERAL PLAN NOISE ELEMENT STANDARDS 5.5-5

TABLE 5.5-3: CITY OF TUSTIN MUNICIPAL CODE RESIDENTIAL NOISE STANDARDS 5.5-6
TABLE 5.5-4: SUMMARY OF 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS 5.5-6
TABLE 5.5-5: CLOSEST SENSITIVE RECEPTORS TO THE PROJECT SITE 5.5-7
TABLE 5.5-6: CONSTRUCTION REFERENCE NOISE LEVELS 5.5-15
TABLE 5.5-7: CONSTRUCTION NOISE LEVEL AT NEAREST RECEPTORS 5.5-16
TABLE 5.5-8: TRAFFIC NOISE LEVELS WITHOUT AND WITH PROPOSED PROJECT 5.5-18
TABLE 5.5-9: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT 5.5-19
TABLE 5.5-10: CONSTRUCTION VIBRATION LEVELS AT NEAREST RECEPTORS 5.5-20
TABLE 5.6-1: CITY OF TUSTIN RHNA BY INCOME LEVEL 5.6-2
TABLE 5.6-2: CITY AND COUNTY EXISTING AND PROJECTED POPULATION, 2019-2050 ..... 5.6-4
TABLE 5.6-3: CITY AND COUNTY HOUSING ESTIMATES BY TYPE 2023 ..... 5.6-4
TABLE 5.6-4: CITY AND COUNTY EXISTING AND PROJECTED HOUSING UNITS, 2019-2050 ..... 5.6-5
TABLE 5.6-5: CITY AND COUNTY EXISTING AND PROJECTED EMPLOYMENT, 2019-2050 ..... 5.6-5
TABLE 5.6-6: JOBS – HOUSING TRENDS IN THE CITY OF TUSTIN 5.6-6
TABLE 5.7-1: FIRE STATIONS NEAR THE PROJECT SITE 5.7-3
TABLE 5.7-2: FIRE STATIONS CALLS FOR SERVICE AND RESPONSE DATA – 2023 ..... 5.7-4
TABLE 5.7-3: EXISTING SCHOOL CAPACITY OF SCHOOLS SERVING THE PROJECT SITE 5.7-11
TABLE 5.7-4: TUSTIN UNIFIED SCHOOL DISTRICT STUDENT GENERATION RATES 5.7-12
TABLE 5.7-5: STUDENTS AT PROJECT BUILDOUT 5.7-12
TABLE 5.7-6: REMAINING SCHOOL CAPACITY WITH BUILDOUT OF THE PROPOSED PROJECT 5.7-13
TABLE 5.8-1: TUSTIN PARK FACILITIES WITHIN 2 MILES OF THE PROJECT SITE 5.8-3
TABLE 5.9-1: EXISTING ROADWAY CHARACTERISTICS WITHIN SPECIFIC PLAN STUDY AREA 5.9-5
TABLE 5.9-2: PROPOSED PROJECT TRIP GENERATION 5.9-18
TABLE 5.9-3: VMT ANALYSIS OF RESIDENTIAL OF PROJECT IMPACT PER CITY GUIDELINES 5.9-20
TABLE 5.9-4: VMT ANALYSIS OF COMMERCIAL PART OF PROJECT IMPACT PER CITY GUIDELINES 5.9-21
TABLE 5.11-1: TUSTIN PROJECTED WATER SUPPLY 5.11-3
TABLE 5.11-2: WATER SUPPLY AND DEMAND DURING NORMAL, DRY, AND MULTIPLE DRY YEAR SCENARIOS (AF) 5.11-4
TABLE 5.11-3: SOLID WASTE DEMAND FROM OPERATION OF THE PROPOSED PROJECT 5.11-24
TABLE 8-1: IMPACT COMPARISON OF THE PROPOSED PROJECT AND ALTERNATIVES 8-15
TABLE 8-2: COMPARISON OF THE PROPOSED PROJECT AND ALTERNATIVES' ABILITY TO MEET OBJECTIVES 8-16

Appendices

APPENDIX A NOTICE OF PREPARATION, SCOPING COMMENTS, AND INITIAL STUDY
APPENDIX B AIR QUALITY, ENERGY, AND GREENHOUSE GAS REPORT
APPENDIX C NOISE AND VIBRATION IMPACT ANALYSIS
APPENDIX D VEHICLE MILES TRAVELED ANALYSIS
APPENDIX E ARCHAEOLOGICAL RESOURCES RECORDS SEARCH

This page intentionally left blank.

1. Executive Summary

This Draft Environmental Impact Report (EIR) evaluates the environmental effects that may result from the construction and operation of the Enderle Center Rezone Project (proposed Project). This EIR has been prepared in conformance with State and City of Tustin environmental policy guidelines for the implementation of the California Environmental Quality Act (CEQA).

This Draft EIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 days in accordance with Section 15087 and Section 15105 of the CEQA Guidelines. During the 45-day review period, the Draft EIR will be available for public review at the City of Tustin website (www.tustinca.org/HousingElementRezone).

A physical copy is available for review at the following locations:

City of Tustin
300 Centennial Way
Tustin, CA 92780

Orange County Library – Tustin Branch
345 E. Main Street
Tustin, CA 92780

Written comments related to environmental issues in the Draft EIR should be addressed to:

Samatha Beier, Senior Planner
Community Development Department
300 Centennial Way, Tustin, CA 92780
HousingElementRezone@tustinca.org

A Notice of Availability of the Draft EIR was published concurrently with distribution of this document.

1.1 PROJECT BACKGROUND

The City of Tustin is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA). The City of Tustin prepared the 2021-2029 Housing Element of the General Plan – the most recent update to the Housing Element that covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029 – in accordance with Government Code Section 65580 et seq. (*Housing Elements*).

On October 5, 2021, the City Council adopted Resolution No. 21-86, certifying the Negative Declaration (ND) for General Plan Amendment (GPA) 2021-0002, which analyzed environmental impacts related to the City's Draft Housing Element Update of the General Plan (Resolution No. 21-87, approving GPA 2021-0002). Following preparation of the Draft Housing Element Update and certification of the ND, the Draft Housing Element went through several rounds of revisions and submittal for review to the State Department of Housing and Community Development (HCD). The City received formal HCD certification of the Housing Element Update on September 12, 2022. On October 4, 2022, the City Council adopted Resolution No. 22-47, approving GPA 2022-0002 for the final Housing Element Update.

The 2021-2029 Housing Element includes several provisions that aim to ensure the City can meet the required "fair share" of affordable housing units, as specified by the State of California. During the Housing Element process, the City assessed a number of sites and areas throughout the community that would be able to accommodate the City's assigned 2021 Regional Housing Needs Allocation (RHNA). The City identified 19

sites and one housing category (accessory dwelling units [ADUs]/junior accessory dwelling units [JADUs]) as qualifying sites to accommodate its RHNA allocation. Of the 19 Housing Element inventory sites, The Market Place (Housing Element Site 18) was identified as necessary for rezoning under Housing Element Program 1.1f in order to allow for high density residential development.

1.2 PROJECT LOCATION

The Project site is approximately 11.80 acres and is located within the City of Tustin. The City is in the central portion of Orange County and is surrounded by the cities of Irvine to the south, Santa Ana to the west, Orange and unincorporated Orange County to the north; and unincorporated Orange County to the east. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, SR 261 to the east, and the I-405 freeway to the south, as illustrated in Figure 3-1, Regional Location.

The Project site consists of Assessor Parcel Numbers (APNs) 401-251-04, -05, and -06; 401-252-05, -06, -08, -09, and -10; and 401-253-03 and -04. The Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by the 55 freeway, including properties west of Yorba Street. The local vicinity of the Project site is illustrated in Figure 3-2, Local Vicinity.

1.3 PROJECT DESCRIPTION SUMMARY

Pursuant to Housing Element Program 1.1f, the City is proposing an overlay zone ("overlay district") for the project site. To accommodate this, a General Plan Amendment (GPA) is needed to establish that higher density residential uses are allowed in the Planned Community Commercial Business (PCCB) land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP); a Zoning Code Amendment (ZCA) to establish Housing Overlay as an overlay zone in conjunction with the Planned Community Commercial districts (base zone); and a Zone Change (ZC) that amends the City's zoning map to apply a Housing Overlay ("HO") district to the project site.

The Housing Element identified Enderle Center as having capacity for 413 housing units. The anticipated development density was determined through the Housing Element process and is a conservative estimate based on development trends in nearby communities. The anticipated development does not rely on the demolition of any existing building, but rather focuses on areas used for surface parking. No specific development is proposed as part of this Project, but this Draft EIR has analyzed all known anticipated impacts of the development of the proposed housing units.

Proposed Housing Overlay District. In addition to the permitted uses under the existing PC COM zoning, the overlay zone would allow residential land uses. Thus, the HO would be added "on top" of the existing PC COM zone (i.e., Base Zone). The overlay zone would also provide development standards related to parking, height, noise, and other standards applicable to residential uses. The HOD text would include a provision that the HOD supersedes the development standards and allowed uses listed within the Base Zone.

Residential uses are currently not allowed on the Project site. Upon approval of the HOD, the Project site could accommodate 413 units over approximately 7 acres of developable land within the existing 11.8-acre site. This would result in a density of 59 du/ac. The anticipated development over 7 acres may take place on underutilized asphalt parking lot areas, and would not require demolition of any existing buildings. Parking displaced as a result of redevelopment would be accommodated by vertical parking structures located within the proposed development.

Infrastructure. Roadways and utilities may be required to support development of future residential construction within the Project site. Future onsite infrastructure improvements that may be necessary for residential development within the Enderle Center include storm drains, wastewater, water, and dry utilities that would connect to existing facilities within the Project site or adjacent to the Project area. Specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed.

1.4 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (14 California Code of Regulations [CCR]) requires "A statement of objectives sought by the proposed project. A clearly written statement of objectives would help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and would aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project."

The primary purpose and goal of the Project is to accommodate the City's 6th Cycle RHNA identified within the City of Tustin 2021-2029 Housing Element. The Project would achieve this goal through the following objectives:

a. Creation of a Housing Overlay District to allow residential development at densities to achieve the estimated capacities determined in the Housing Element and without inhibitors to residential development.
b. Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.
c. Increase flexibility in allowed uses and development potential in an underutilized area of the City of Tustin.

2. Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

1.5 SUMMARY OF ALTERNATIVES

Section 8.0, *Alternatives,* of this EIR analyzes a range of reasonable alternatives to the proposed Project. The alternatives that are analyzed in detail in Section 8.0 are summarized below.

- **No Project/No Development Alternative.** This alternative consists of the Project not being approved, and the Project site would remain in the conditions that existed at the time the Notice of Preparation was published (February 16, 2024).
- **Reduced Nonresidential Project Alternative.** The Reduced Nonresidential Project alternative would allow for the same potential future development of housing units to occur as proposed by the Project, but with a reduction of nonresidential uses of 35 percent. The Reduced Nonresidential Project Alternative would allow for the potential future buildout of 413 residential units and 46,510 SF of new nonresidential development. The reduced nonresidential square footage would allow for increased setbacks, passenger vehicle parking, and truck parking. Areas planned for physical impact would be identical to those required for development of the proposed Project. This alternative would still require a General Plan Amendment (GPA), adoption of a zone change and a Zoning Code Amendment (ZCA), and development of Objective Design Standards (ODS).
- **Alternate Site Alternative.** An alternate site for the Project was eliminated from further consideration. Any alternate site would need to occur within the City of Tustin. The City is required by state law to rezone housing shortfall sites according to what has been approved under the certified Housing Element (Government Code § 65583.2, Senate Bill 197). The site identified within the City's 2021-2029 Housing

Element is Enderle Center (Project site), and an alternate site would fail to meet most of the project objectives, is infeasible, and would not be compliant with state law or the City's Housing Element. Additionally, if the Project were to occur on an alternate site and rezoning were conducted within a different commercial center in the City, similar impacts would result and comparable mitigation would be required; therefore, impacts would not be reduced under this alternative. Therefore, this alternative has been determined infeasible.

- **No Project/Buildout of Existing Land Use Alternative.** A No Project/Buildout of Existing Land Use alternative was eliminated for further consideration. Under this alternative, buildout of the nonresidential uses would occur as permitted under the existing land use designations, but the Project site would not be rezoned to allow for residential uses. The City is required by state law to rezone housing shortfall sites according to what has been approved under the certified Housing Element (Government Code § 65583.2, Senate Bill 197). The site identified within the City's 2021-2029 Housing Element is Enderle Center (Project site) and failing to rezone the site for future housing would fail to meet all of the project objectives, which would therefore render the alternative as infeasible, and further, would not be compliant with state law or the City's Housing Element.
- **Reduced Project Development.** A Reduced Project Development Alternative was eliminated from further consideration. The Reduced Project Development alternative would redesignate the Project site to allow for development of future residential and additional square footage of nonresidential development, similar to the proposed Project. However, Project buildout would be reduced by 20 percent for residential and by 95 percent for new nonresidential, limiting the overall future buildout to a maximum of 330 residential units and 4,787 SF (91,923 SF total) of additional nonresidential development. This alternative would still require approval of the Housing Overlay (HO) District, a General Plan Amendment (GPA), adoption of a zone change, adoption of a zoning code amendment (ZCA), and development of Objective Design Standards (ODS). This alternative would eliminate the Project's significant and unavoidable GHG impact by reducing GHG emissions 77 percent, from 12,804 MT CO2e/yr. net new emissions (Project buildout minus existing use) to 2,999 MT CO2e/yr, proportional to the proposed reduction in development. However, under this alternative, only five percent of the additional nonresidential square footage (above and beyond what is existing) currently allowed under existing provisions would be developed. Furthermore, under this alternative, only 330 dwelling units would be allowed to be constructed and the City would have an 83 dwelling unit deficit in meeting their state mandated RHNA fair share. Because this alternative would not meet the City's legal obligation to rezone the site to meet the necessary residential capacity consistent with the City's certified Housing Element Update, this alternative has been rendered infeasible and is rejected from further consideration.

1.6 SUMMARY OF IMPACTS

Table 1-1 summarizes the conclusions of the environmental analysis contained in this Draft EIR. Section 7.0, *Effects Not Found Significant,* establishes that the proposed Project would not result in impacts related to certain thresholds from CEQA Appendix G including Aesthetics, Agricultural Resources, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Mineral Resources, and Wildfire. Thus, no further assessment of those impacts was required in the Draft EIR. Therefore, the numbering of impacts shown in Table 1-1 reflects the omission of further evaluation for certain thresholds.

Relevant standard conditions of approval are identified, and mitigation measures are provided for all potentially significant impacts. The level of significance of impacts after the proposed mitigation measures are applied are identified as either significant and unavoidable, less than significant, or no impact.

Table 1-1: Summary of Impacts

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 Air Quality				
Impact AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?		No Impact	None required	No impact
Impact AQ-2: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard?	**PPP AQ-1: Rule 403.** The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, which includes the following: • All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions. • The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project are watered, with complete coverage of disturbed areas, at least 3 times daily during dry weather; preferably in the mid-morning, afternoon, and after work is done for the day. The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	reduced to 15 miles per hour or less.			
Impact AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?	**PPP AQ-1: Rule 403.** As listed above. **PPP AQ-2: Rule 1113.** The Project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used.	Potentially Significant	**Mitigation Measure AIR-1.** Prior to discretionary approval by the City of Tustin (City) for residential development projects subject to California Environmental Quality Act (CEQA) review, project applicants shall prepare and submit a technical assessment evaluating potential project-related air quality impacts, including a localized impacts analysis, to the City for review and approval. The analysis shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related emissions exceed applicable SCAQMD thresholds of significance, the City shall require that applicants for new development projects incorporate mitigation measures to reduce emissions. The identified measures shall be included as part of the conditions of approval. Additionally, if project-related localized emissions exceed the SCAQMD's thresholds, a dispersion modeling analysis shall be conducted to calculate potential health risk from project implementation.	Significant and Unavoidable
Impact AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely	**PPP AQ-4: Rule 402.** The Project is required to comply with the provisions of South Coast Air	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
affecting a substantial number of people?	Quality Management District (SCAQMD) Rule 402. The Project shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property			
Cumulative	**PPP AQ-1: Rule 403.** As listed above. **PPP AQ-2: Rule 1113.** As listed above. **PPP-AQ-3: Rule 402.** As listed above.	Potentially Significant	**Mitigation Measure AIR-1.** As listed previously.	Significant and Unavoidable
5.2 Energy				
Impact ENE-1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	**PPP E-1: CalGreen Compliance:** The Project is required to comply with the CalGreen Building Code to ensure efficient use of energy. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.	Less than Significant	None required	Less than Significant
Impact ENE-2: Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	**PPP E-1: CalGreen Compliance.** As listed above.	Less than Significant	None required	Less than Significant
Cumulative	**PPP E-1: CalGreen Compliance.** As listed above.	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.3 Greenhouse Gas Emissions				
Impact GHG-1: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**PPP E-1: CALGreen Compliance.** As listed above.	Potentially Significant	**Mitigation Measure GHG-1.** Prior to discretionary approval by the City of Tustin (City) for future development projects, project applicants shall prepare and submit a technical assessment evaluating potential project-related greenhouse gas (GHG) impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related GHG emissions exceed applicable SCAQMD thresholds of significance and/or Statewide GHG reduction targets, the City shall require that applicants for new development projects incorporate mitigation measures to reduce GHG emissions. Mitigation measures could include, but are not limited, to energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the conditions of approval.	Significant and Unavoidable
Impact GHG-2: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**PPP E-1: CALGreen Compliance.** As listed above.	Potentially Significant	**Mitigation Measure GHG-1.** As listed above.	Significant and Unavoidable

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Cumulative	**PPP E-1: CALGreen Compliance.** As listed above.	Potentially Significant	**Mitigation Measure GHG-1.** As listed above.	Significant and Unavoidable
5.4 Land Use and Planning				
Impact LU-2: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	**PPP GEO-1: CBC Title 24, Part 2.** Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process. **PPP HYD-1: SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	(SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site. **PPP HYD-2: City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. **PPP HYD-3: WQMP.** Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.			

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PPP T-1: Sidewalk Standards. Sidewalks shall be provided on a private street for attached and detached residential products in accordance with Standard B102 of the City's Construction Standards, Storm Drain and On-Site Private Improvements, and is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban Development's Fair Housing Accessibility Guidelines. **PPP T-2: Traffic Control/Utilities.** All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design			
Cumulative	**PPP GEO-1: CBC Title 24, Part 2.** As listed above. **PPP HYD-1: SWPPP.** As listed above.	Less than Significant	None required.	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PPP HYD-2: City of Tustin Grading Manual. As listed above. **PPP HYD-3: WQMP.** As listed above. **PPP T-1: Sidewalk Standards.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.			
5.5 Noise				
Impact NOI-1: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**PPP NOI-1: Construction Hours.** Per the Tustin City Code Section 4616, construction activities are allowed only between the hours of 7:00 AM and 6:00 PM, Monday through Friday and between 9:00 AM to 5:00 PM on Saturdays with no activity allowed on Sundays and City-observed federal holidays.	Potentially Significant	**Mitigation Measure NOI-1:** All future development shall prepare a project-specific Final Acoustical Report to confirm whether any proposed exterior noise sensitive areas would experience noise levels greater than 65 dBA CNEL and whether interior noise levels would exceed 45 dBA CNEL and identify any noise reduction features for the proposed development (e.g. upgraded windows with Sound Transmission Class (STC) ratings of 30–35). Additionally, the Final Acoustical Report shall confirm that proposed siting of noise-generating stationary sources, if any, will not result in an exceedance of applicable noise thresholds at surrounding land uses.	Less than Significant
Impact NOI-2: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?	**PPP NOI-1: Construction Hours.** As listed above.	Less than Significant	None required	Less than Significant
Impact NOI-3: For a project located within the vicinity of a		No Impact	None required.	No Impact

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?				
Cumulative	**PPP NOI-1: Construction Hours.** As listed above.	Potentially Significant	**Mitigation Measure NOI-1.** As listed above.	Less than Significant
5.6 Population and Housing				
Impact POP-1: Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?		Less than Significant	None required.	Less than Significant.
Cumulative		Less than Significant	None required.	Less than Significant.
5.7 Public Services				
Impact PS-1: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: (i) Fire protection?	**PPP PS-1:** OCFA Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development. **PPP PS-2 :** Tustin Code of Ordinances Chapter 8100; Building and Construction Codes Adopted by Reference. **PPP PS-3:** Government Code Section 65995(b).	Less than Significant	None required.	Less than Significant.

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
(ii) Police protection? (iii) Schools? (iv) Parks? (v) Other public facilities?				
Cumulative	**PPP PS-1:** As listed above. **PPP PS-2 :** As listed above. **PPP PS-3:** As listed above.	Less than Significant	None required.	Less than Significant.
5.8 Recreation				
Impact REC-1: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	**PPP R-1: City Park Requirements.** Tustin City Code Section 9331 – Dedications, Reservations and Development Fees. All future development shall be consistent with this standard.	Less than Significant	None required.	Less than Significant
Impact REC-2: Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	**PPP R-1: City Park Requirements.** As listed above.	Less than Significant	None required.	Less than Significant
Cumulative	**PPP R-1: City Park Requirements.** As listed above.	Less than Significant	None required.	Less than Significant
5.9 Transportation				
Impact TRA-1: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?		Less than Significant	None required	Less than Significant
Impact TRA-2: Would the Project conflict or be inconsistent with		Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
CEQA Guidelines § 15064.3, subdivision (b)?				
Impact TRA-3: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**PPP T-1: Sidewalk Standards.** Sidewalks shall be provided on a private street for attached and detached residential products in accordance with Standard B102 of the City's Construction Standards, Storm Drain and On-Site Private Improvements, and is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban Development's Fair Housing Accessibility Guidelines. **PPP T-2: Traffic Control/Utilities.** All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.	Less than Significant	None required	Less than Significant
Impact TRA-4: Would the Project result in inadequate emergency access?	**PPP T-1: Sidewalk Standards.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Cumulative	**PPP T-1: Sidewalk Standards.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant	None required	Less than Significant
5.10 Tribal Cultural Resources				
Impact TCR-1: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? (ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	**PPP TCR-1**: Native American historical and cultural resources and sacred sites are protected under PRC Sections 5097.9 to 5097.991, which require that descendants be notified when Native American human remains are discovered and provide for treatment and disposition of human remains and associated grave goods. **PPP CUL-1: Human Remains.** Should human remains or funerary objects be discovered during Project construction, the Project would be required to comply with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body (within a 100-foot buffer of the find) until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and	Potentially Significant	**Mitigation Measure TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.** a. Prior to the issuance of demolition or grading permits for any projects that would disturb previously undisturbed soils (native soils) or soils that have native fill, the project applicant/developer shall retain a Native American Monitor, with first preference given to the Gabrieleño Band of Mission Indians – Kizh Nation, who responded to the City's request for consultation on November 14, 2023 (first preference Tribe, Tribe). The applicant/developer shall allow 45 days from the initial contact with the first preference tribe to enter into a contract for monitoring services. If the applicant/developer is unable to contact the Kizh Nation after three documented attempts or is unable to secure an	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of notification by the NAHC.		agreement, the applicant shall report to the lead agency and who will contact the Kizh Nation to validate that the parties were unable to enter into an agreement. The applicant/developer shall have made three documented attempts to contact the Kizh Nation directly to enter into a tribal monitoring agreement. If the applicant/developer can demonstrate they were unable to secure an agreement with the first preference tribe, as validated and documented by the Community Development Department in writing, or if the contracted tribe fails to fulfill its obligation under the contract terms, then the applicant/developer may retain an alternative qualified tribal monitor from a culturally affiliated tribe if approved by the City. The monitor shall be retained prior to the issuance of a demolition permit or grading permit, and the commencement of any development related "ground-disturbing activity" for the subject project at all project locations (i.e., both on-	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, auguring, grubbing, boring, grading, excavation, drilling, and trenching for the purposes of reconstruction and new development. "Ground-disturbing activity" shall not include minor maintenance activities such as potholing, tree removal, and parking lot maintenance. This mitigation measure does not apply to projects that would only disturb soils made up of artificial fill, as verified by a soils or geotechnical report. b. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity. c. The monitor will complete daily monitoring logs that will provide descriptions of the	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh Nation. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the consulting tribe. If a monitor is selected from a tribe other than the Kizh Nation, the Kizh Nation shall be contacted if any discoveries are found. d. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the consulting tribe from a designated point of contact for the project	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities and that have the potential to impact local TCRs on the project site or in connection with the project are complete. **Mitigation Measure TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial):** Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the tribal monitor and consulting archaeologist. If the consulting tribe is other than the Gabrieleño Band of Mission Indians – Kizh Nation, the Kizh Nation shall be contacted and the consulting tribe will recover and retain all discovered TCRs in the form and/or manner the Kizh Nation deems appropriate, in the Kizh Nation sole discretion, and for any purpose the Kizh Nation deems appropriate, including for educational, cultural and/or historic purposes.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			Mitigation Measure TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects a. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute. b. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed. c. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). d. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			e. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.	
Cumulative	**PPP TCR-1**: As listed above. **PPP CUL-1: Human Remains.** As listed above.	Potentially Significant	**TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.** As listed above. **TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial).** As listed above. **TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects.** As listed above.	Less than Significant
5.11 Utilities and Service Systems				
Impact UT-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	**PPP HYD-1: SWPPP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above. **PPP UT-1: California Building Code.** All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements.	Potentially Significant	**Mitigation Measure UT-1:** Future proposed Projects shall prepare capacity analyses of existing water utilities in the area to ensure conveyance and pressure is adequate for future projects proposed. The developer shall then identify infrastructure improvements necessary for the proposed development. The developer will be responsible for preparing a capacity analysis in coordination with the City. The capacity analysis and infrastructure improvements shall be reviewed and approved by the City prior to approval of the construction permit.	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact UT-2: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?		Less than Significant		Less than Significant
Impact HYD-1: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?		Less than Significant		Less than Significant
Impact HYD-2: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?		Less than Significant		Less than Significant
Impact UT-3: Would the Project require or result in the construction of new wastewater facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	**PPP HYD-1: SWPPP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above. **PPP UT-1: California Building Code.** As listed above.	Potentially Significant	**Mitigation Measure UT-2:** Future proposed Projects shall prepare capacity analyses of existing sewer utilities in the area to ensure conveyance and pressure is adequate for future projects proposed. The developer shall then identify infrastructure improvements necessary for the proposed development. The developer will be responsible for preparing a capacity analysis in coordination with the EOCWD and the City. The capacity analysis and infrastructure improvements shall be reviewed and approved by	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			EOCWD and the City prior to approval of the construction permit.	
Impact UT-4: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?		Potentially Significant	**MM UT-2:** As listed above.	Less than Significant
Impact UT-5: Would the Project require or result in the relocation or construction of new drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.	**PPP HYD-1: SWPPP.** As listed above. **PPP HYD-3: WQMP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant		Less than Significant
Impact UT-6: Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?		Potentially Significant	None required.	Less than Significant
Impact UT-7: Would the Project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?		Less than Significant		Less than Significant
Impact UT-8: Would the Project require or result in the relocation or construction of a new or expanded electric power, natural		Less than Significant		Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
gas, or telecommunications facilities, the construction of which could cause significant environmental effects?				
Cumulative	**PPP HYD-1: SWPPP.** As listed above. **PPP HYD-3: WQMP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above. **PPP UT-1: California Building Code.** As listed above.	Potentially Significant	**Mitigation Measure UT-1: Water Utilities Capacity Analyses.** As listed above. **Mitigation Measure UT-2: Wastewater Utilities Capacity Analyses.** As listed above.	Less than Significant

This page intentionally left blank.

2. Introduction

This Draft Environmental Impact Report (EIR) is an informational document that evaluates the environmental effects that may result from the planning, construction, and operation of the proposed Enderle Center Rezone Project (Project), which requires approval of the General Plan Amendment, Zoning Code Amendment, Zone Change, Housing Overlay district and adoption of Objective Design Standards for residential development.

2.1 PURPOSE OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) requires that all State and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority prior to taking action on those projects. The CEQA Guidelines provide the following information regarding the purpose of an EIR:

- **Project Information and Environmental Effects.** An EIR is an informational document that will inform public agency decision makers and the public of the potential significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (State CEQA Guidelines Section 15121(a)).
- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to enable decision makers to make an intelligent decision that takes into account environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (State CEQA Guidelines Section 15151).

As a public disclosure document, the purpose of an EIR is not to recommend either approval or denial of a project, but to provide information regarding the physical environmental changes that would result from an action being considered by a public agency to aid in the agency's decision-making process.

2.2 LEGAL AUTHORITY

This Draft EIR has been prepared in accordance with all criteria, standards, and procedures of CEQA (California Public Resource Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 et seq.).

Pursuant to CEQA Section 21067 and State CEQA Guidelines Article 4 and Section 15367, the City of Tustin is the Lead Agency under whose authority this Draft EIR has been prepared. "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Serving as the Lead Agency and before taking action on any approvals for the Project, the City of Tustin has the obligation to: (1) ensure that this Draft EIR has been completed in accordance with CEQA; (2) review and consider the information contained in this Draft EIR as part of its decision-making process; (3) make a statement that this Draft EIR reflects the City of Tustin's independent judgment; (4) ensure that all significant effects on the environment are eliminated or substantially lessened where feasible; and, if necessary, (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or Project alternatives identified in this Draft EIR are infeasible and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (State CEQA Guidelines Sections 15090 through 15093).

Pursuant to State CEQA Guidelines Sections 15040 through 15043, and upon completion of the CEQA review process, the City of Tustin will have the legal authority to do any of the following:

- Approve the Project;
- Require feasible changes in any or all activities involved in the Project in order to substantially lessen or avoid significant effects on the environment;
- Disapprove the Project, if necessary, in order to avoid one or more significant effects on the environment that would occur if the Project was approved as proposed; or
- Approve the Project even though the Project would cause a significant effect on the environment if the City of Tustin makes a fully informed and publicly disclosed decision that: (1) there is no feasible way to lessen the effect or avoid the significant effect; and (2) expected benefits from the Project will outweigh significant environmental impacts of the Project.

2.3 EIR SCOPE AND CONTENT

Impacts Found to be Potentially Significant. The City prepared an Initial Study (IS) and determined that an EIR should be prepared for the Project. As a result, and pursuant to the requirements of CEQA, the IS and a Notice of Preparation (NOP) was prepared and circulated between February 16, 2024, and March 20, 2024, for the required 30-day public review period. The purpose of the NOP was to solicit early comments from public agencies with expertise in subjects that are discussed in this Draft EIR and to solicit comments from the public regarding potential Project environmental impacts. The IS, NOP, and any written responses to the NOP are included in Appendix A of this Draft EIR. Topics requiring a detailed level of analysis evaluated in this Draft EIR have been identified based upon the responses to both the IS/NOP and a review of the Project by the City. The City determined through the initial review process that impacts related to the following topics are potentially significant as discussed in the IS and require a detailed level of analysis in this Draft EIR.

- Air Quality
- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

Impacts Found Not to be Significant. CEQA Guidelines Section 15126.2(a) states that "[a]n EIR shall identify and focus on the significant effects on the environment." Topics that have been determined not to be significant and are therefore not discussed in detail in the Draft EIR were identified based upon the responses to the IS/NOP and a review of the Project by the City. As further detailed in Section 7, *Impacts Found Not to Be Significant*, of this Draft EIR, and as discussed in the IS, the City determined through the initial review process that impacts related to the following topics are not potentially significant and are not required to be analyzed in this Draft EIR.

- Aesthetics
- Agriculture and Forestry Resources
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Mineral Resources
- Wildfire

2.4 ENVIRONMENTAL IMPACT REPORT PROCESS

A project-level analysis has been provided pursuant to State CEQA Guidelines Section 15161. This Draft EIR meets the content requirements discussed in State CEQA Guidelines Article 9, beginning with State CEQA Guidelines Section 15120.

2.4.1 Notice of Preparation/Initial Study

The NOP requested members of the public and public agencies to provide input on the scope and content of environmental impacts that should be included in the Draft EIR being prepared. Comments received on the IS/NOP are included in Appendix A and summarized in Table 2-1, which also includes a reference to the Draft EIR section(s) in which issues raised in the comment letters are addressed.

Table 2-1: Summary of NOP Comment Letters

Comment Letter and Commenter	Relevant Draft EIR Sections
State and Local Agencies	
Native American Heritage Commission (NAHC), February 21, 2024	
The comment includes a description of requirements regarding requirements for preparation of an Environmental Impact Report (EIR) pursuant to CEQA Guidelines Section 15064. Additionally, the commenter provides requirements and project applicability under Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18). The commenter recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible. The commenter provides a summary of requirements for AB 52 and SB 18 process.	Section 5.10, *Tribal Cultural Resources*
California Department of Transportation (Caltrans), March 18, 2024	
This comment letter states that the Project is in proximity to SR-55 thus a VMT study should be completed with mitigation measures, as necessary and OPR's guidelines be used. The comment letter also encourages accompanying complete street elements, such as bike lanes, and pedestrian safety features to enhance safety for all road users; and suggests the addition of a discussion on existing bus route services and potential future transit improvement opportunities as well as the encouragement of said transit to future residents for reduced traffic congestion, VMT, and improved Air Quality. The comment letter also suggests Amazon package deliveries be considered to reduce traffic congestion and that the Project ensure truck parking and ingress/egress points do not interfere with bicycle and vehicle parking or pedestrian paths. In addition, the comment letter suggests that freight pick up and drop off times not coincide with peak commute hours and that on street freight-only parking be considered as well as that the Project work with local partners to mitigate truck traffic on residential streets. Lastly, the comment letter states that any work performed within a Caltrans right-of-way will require discretionary approval and as such, appropriate applications should be completed.	Section 5.3, *Air Quality* Section 5.14, *Transportation*

Orange County Fire Authority (OCFA), March 19, 2024	
This comment letter states the OCFA provides medical services response to 23 cities in Orange County and all unincorporated areas and operates 78 fire stations throughout Orange County. The letter states OCFA believes the Project will have a less than significant impact related to fire services.	Section *5.7, Public Services*

2.4.2 Public Scoping Meeting

Pursuant to Section 15082(c)(1) of the CEQA Guidelines, the City of Tustin hosted a public scoping meeting for members of the public and public agencies to provide input as to the scope and content of the environmental information and analysis to be included in the Draft EIR for the Project. A scoping meeting was held on March 6, 2024 at Tustin Area Senior Center located at 200 S C St, Tustin, CA 92780.

Attendants of the public scoping meeting were mostly patrons of the Enderle Center and residents of Tustin, in addition to a few retail business owners. Comments received from the attendees during the Scoping Meeting included concerns regarding traffic congestion, water supply, hazardous materials, public services, land use, and aesthetics. More specifically, concerns that were raised included: parking for buildout of the proposed Project and traffic delays on the adjacent freeway ramps; whether increased development could impact existing water supply; whether hazardous materials were considered based on the historical use of the site; whether the school district has sufficient capacity to serve the Project; and how new development on the site could impact neighboring visual character.

2.4.3 Public Review of the Draft EIR

The City of Tustin has filed a Notice of Completion (NOC) with the Governor's Office of Planning and Research State Clearinghouse, indicating that this Draft EIR has been completed and is available for review and comment. The Project requires a General Plan Amendment; thus, the Project meets the definition of a project of statewide, regional, or areawide significance pursuant to Section 15206 of the CEQA Guidelines and is subject to noticing requirements accordingly. A Notice of Availability (NOA) of the Draft EIR was published concurrently with distribution of this document. The Draft EIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 days in accordance with State CEQA Guidelines Sections 15087 and 15105. During the 45-day review period, the Draft EIR is available for public review digitally on the City of Tustin's website at:

https://www.tustinca.org/HousingElementRezone

A physical copy is available for review at the following locations:

City of Tustin
300 Centennial Way
Tustin, CA 92780

Orange County Library – Tustin Branch
345 E. Main Street
Tustin, CA 92780

Written comments related to environmental issues in the Draft EIR should be addressed to:

Samatha Beier, Senior Planner
City of Tustin
300 Centennial Way
Tustin, CA 92780
(714) 573-3354
HousingElementRezone@tustinca.org

2.4.4 Final EIR

Upon completion of the 45-day review period of the Draft EIR, written responses to all comments related to the environmental issues in the Draft EIR will be prepared and incorporated into a Final EIR. Written responses to comments will be made available at least 10 days prior to the public hearing at which the certification of the Final EIR will be considered by the City Council. These comments, and their responses, will be included in the Final EIR for consideration by the City of Tustin, as well as other responsible and trustee agencies per CEQA. The Final EIR may also contain corrections and additions to the Draft EIR and other information relevant to the environmental issues associated with the Project. The Final EIR will be available for public review prior to its certification by the City of Tustin. Notice of availability of the Final EIR will be sent to all who comment on the Draft EIR.

2.5 ORGANIZATION OF THIS DRAFT EIR

This Draft EIR is organized into the following Sections. To help the reader locate information of interest, a brief summary of the contents of each chapter is provided.

- **Section 1, Executive Summary:** This section provides a brief summary of the Project area, the Project, and alternatives. This section also provides a summary of the potential environmental impacts and mitigation measures, applicable Project design features, applicable regulatory requirements, and the level of significance after implementation of the mitigation measure. The level of significance after implementation of the proposed mitigation measure(s) will be characterized as either *less than significant* or *significant and unavoidable*.
- **Section 2, Introduction:** This section provides an overview of the purpose and use of the EIR, the scope of this Draft EIR, a summary of the legal authority for the Draft EIR, a summary of the environmental review process, and the general format of this document.
- **Section 3, Project Description:** This section provides a detailed description of the Project, its objectives, and a list of Project-related discretionary actions.
- **Section 4, Environmental Setting:** This section provides a discussion of the existing conditions within the Project area.
- **Section 5, Environmental Impact Analysis:** This section is divided into sub-sections for each environmental impact area. Each section includes a summary of the existing statutes, ordinances, and regulations that apply to the environmental impact area being discussed; the analysis of the Project's direct and indirect environmental impacts on the environment, including potential cumulative impacts that could result from the Project; applicable Project design features, standard conditions, and plans, policies, and programs that could reduce potential impacts; and feasible mitigation measures that would reduce or eliminate the significant adverse impacts identified. Impacts that cannot be mitigated to *less than significant* are identified as *significant and unavoidable*.
- **Section 6, Other CEQA Considerations:** This section summarizes the significant and unavoidable impacts that would occur from implementation of the Project and provides a summary of the environmental effects of the implementation of the Project that were found not to be significant. Additionally, this section provides a discussion of various CEQA-mandated considerations including growth-inducing impacts and the identification of significant irreversible changes that would occur from implementation of the Project. In addition, this section provides a discussion of impacts found not to be significant.
- **Section 7, Effects Found Not to be Significant:** This section summarizes the potential environmental effects related to the Project that were determined not to be significant during preparation of this EIR.
- **Section 8, Alternatives:** This section describes and analyzes a reasonable range of alternatives to the Project. The CEQA-mandated No Project Alternative is included along with alternatives that would

reduce one or more significant effects of the proposed Project. As required by the CEQA Guidelines, the environmentally superior alternative is also identified.

- **Section 9, Report Preparation and Persons Contacted:** This section lists authors of the Draft EIR and City of Tustin staff that assisted with the preparation and review of this document. This section also lists other individuals and/or organizations that were contacted for information that is included in this Draft EIR document.

2.6 INCORPORATION BY REFERENCE

State CEQA Guidelines Section 15150 allows for the incorporation "by reference all or portions of another document… most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of a problem at hand." The purpose of incorporation by reference is to assist the Lead Agency in limiting the length of this Draft EIR. Where this Draft EIR incorporates a document by reference, the document is identified in the body of the Draft EIR, citing the appropriate section(s) of the incorporated document and describing the relationship between the incorporated part of the referenced document and this Draft EIR.

3. Project Description

"Project," as defined by the State CEQA Guidelines, means "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)… enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700." (14 California Code of Regulations [CCR] Section 15378(a).)

The Project analyzed in this Draft EIR does not propose any specific development. This Draft EIR analyzes the potential for future development that the Project could facilitate, if approved. For analysis purposes, the Project is assumed to be developed in one phase and constructed by 2029. The Draft EIR analyzes buildout at a programmatic level of detail, based upon maximum development potential of the Project, compared to the existing conditions.

3.1 PROJECT BACKGROUND

The City of Tustin prepared the 2021-2029 Housing Element of the General Plan in accordance with Government Code Section 65580 et seq. The City is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The update to the Housing Element covers the Sixth Cycle planning period from October 15, 2021 to October 15, 2029. The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA).

On October 5, 2021, the City Council adopted Resolution No. 21-86, certifying the Negative Declaration (ND) for GPA 2021-0002 (and Resolution No. 21-87, approving GPA 2021-0002), which analyzed environmental impacts related to the City's Draft Housing Element Update of the General Plan. The Draft Housing Element Update was prepared, as required by State Housing Element law. Following preparation of the Draft Housing Element Update and certification of the ND, the Draft Housing Element went through several rounds of revisions and submittal for review to the State Department of Housing and Community Development (HCD). The City received formal certification of the Housing Element Update from HCD on September 12, 2022. On October 4, 2022, the City Council adopted Resolution No. 22-47, approving General Plan Amendment 2022-0002 for the final Housing Element Update.

The 2021-2029 Housing Element includes several provisions that aim to ensure the City can meet the required "fair share" of affordable housing units, as specified by the State of California. During the Housing Element process, the City assessed a number of properties and areas throughout the community that would be able to accommodate the City's assigned 2021 Regional Housing Needs Allocation (RHNA). The City identified 19 sites and one housing category (accessory dwelling units [ADUs]/junior accessory dwelling units [JADUs]) as qualifying sites to accommodate their RHNA allocation. Of the 19 Housing Element inventory sites, Enderle Center (Housing Element Site 17) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development.

Enderle Center (the Project site) consists of approximately 11.80 acres of privately owned property. Currently, the Project site is developed with a commercial center. Of the site area, seven acres within the southeastern portion of the Project site have been identified as suitable for housing development. These seven acres are currently made up of paved parking areas and, based on the proposed overlay zone, redevelopment of the site would accommodate up to 413 housing units.

3.2 PROJECT LOCATION

The Project site is approximately 11.80 acres and is located within the City of Tustin. The City is in the central portion of Orange County and is surrounded by the cities of Irvine to the south, Santa Ana to the west, Orange and unincorporated Orange County to the north; and unincorporated Orange County to the east. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, SR 261 to the east, and the I-405 freeway to the south, as illustrated in Figure 3-1, *Regional Location*.

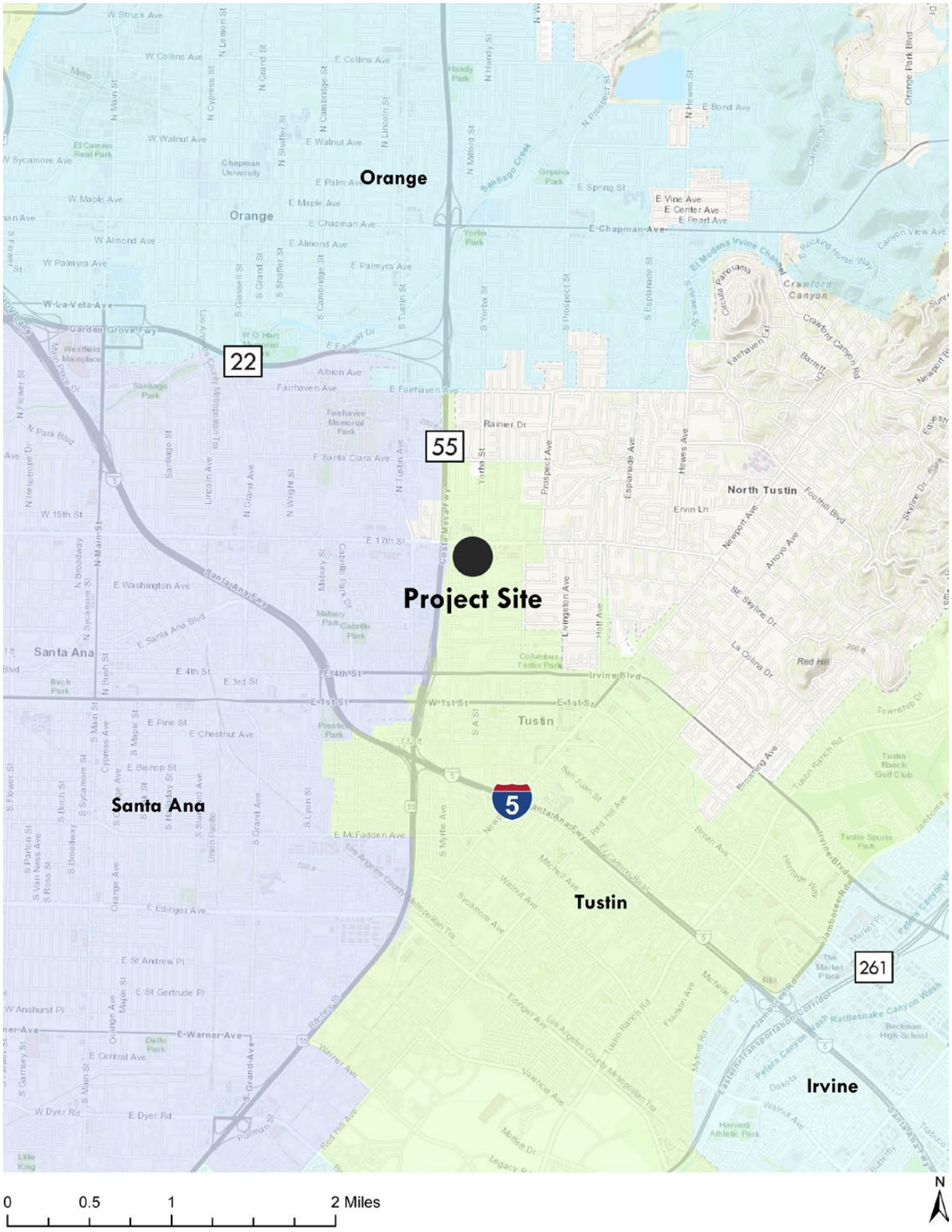
The Project site consists of Assessor Parcel Numbers (APNs) 401-251-04, -05, and -06; 401-252-05, -06, -08, -09, and -10; and 401-253-03 and -04. The Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by the 55 freeway, including properties west of Yorba Street.

The local vicinity of the Project site is illustrated in Figure 3-2, *Local Vicinity*.

3.3 EXISTING CONDITIONS

The Enderle Center is currently developed with 87,136 SF of commercial business, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas. Figure 3-3, *Aerial*, illustrates the Project site in its current condition.

Regional Location

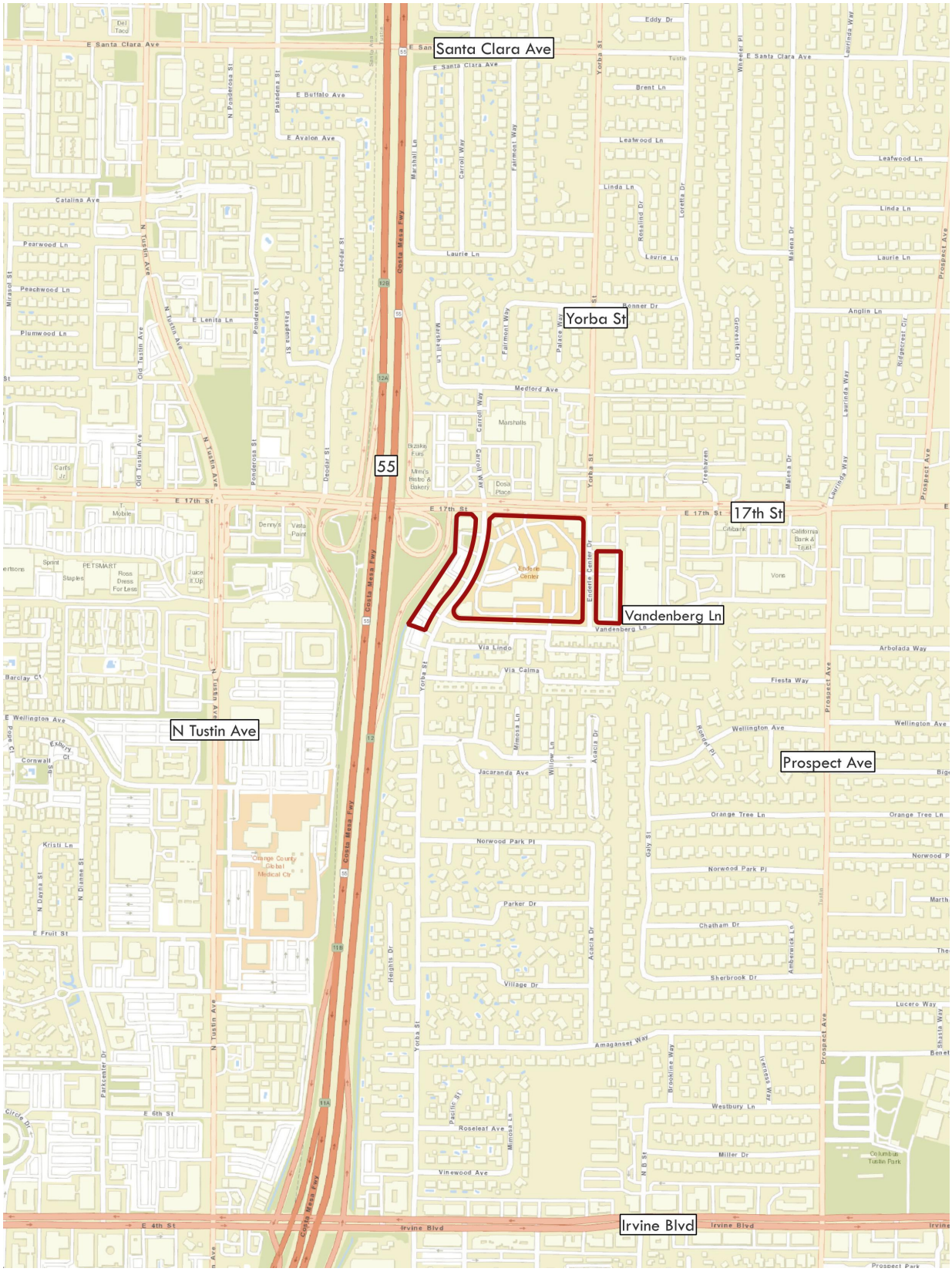


Enderle Center Rezone Project
City of Tustin

Figure 3-1

This page intentionally left blank.

Local Vicinity



Enderle Center Rezone Project
City of Tustin

Figure 3-2

This page intentionally left blank.

Aerial View

Enderle Center Rezone Project
City of Tustin

Figure 3-3

This page intentionally left blank.

3.3.1 Existing Land Use and Zoning

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The PCCB land use designation provides opportunities for a variety of miscellaneous retail, professional office, and service-oriented business activities. The PC COM zoning is intended to allow diversification of the relationships of various buildings, structures and open spaces in planned building groups while ensuring substantial compliance with the district regulations and other provisions of the Planned Community District zone.

The Project site's existing General Plan land use and zoning designations are shown in Figure 3-4, *Existing General Plan Land Use* and Figure 3-5, *Existing Zoning*.

3.3.2 Surrounding General Plan and Zoning Designations

The Project site is located within a developed area. The surrounding land uses and their designations are described in Table 3-1.

Table 3-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
North	17th Street followed by commercial, residential and office uses	Community Commercial (CC), Planned Community Commercial/Business (PCCB)	Retail Commercial (C1) with Parking Overlay, Commercial General (CG), & Planned Community Commercial (PC COM)
East	Enderle Center Drive followed by office uses	Planned Community Commercial/Business (PCCB)	Planned Community Commercial (PC COM)
South	Vandenberg Lane followed by residential uses	Planned Community Residential (PCR)	Planned Community Residential (PC RES)
West	Tustin city limits and SR-55 freeway, followed by restaurants and office uses in the City of Santa Ana	Professional and Administrative Office (PAO) & General Commercial (GC) (*City of Santa Ana*)	Professional (P) & Community Commercial (C1) (*City of Santa Ana*)

3.4 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (14 California Code of Regulations [CCR]) requires "A statement of objectives sought by the proposed project. A clearly written statement of objectives would help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and would aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project." The primary purpose and goal of the Project is to accommodate the City's 6th Cycle RHNA identified within the City of Tustin 2021-2029 Housing Element. The Project would achieve this goal through the following objectives:

a. Creation of a Housing Overlay (HO) District to allow residential development at densities to achieve the estimated capacities determined in the Housing Element and without inhibitors to residential development.
b. Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.
c. Increase flexibility in allowed uses and development potential in an underutilized area of the City of Tustin.

d. Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

3.5 DESCRIPTION OF THE PROJECT

3.5.1 Project Overview

Pursuant to Housing Element Program 1.1f, the City is proposing an overlay zone ("overlay district") for the project site. To accommodate this, a General Plan Amendment (GPA) is needed to establish that higher density residential uses are allowed in the Planned Community Commercial Business (PCCB) land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP); a Zoning Code Amendment (ZCA) to establish Housing Overlay District (overlay zone) in conjunction with the Planned Community Commercial Districts (base zone); and a Zone Change (ZC) that amends the City's zoning map to apply a Housing Overlay ("HO") District to the project site. The HO District for the Project authorizes the submittal of a development plan for the construction of housing on up to 7 acres of the site's 11.80 acres, up to a total of 413 dwelling units. The HO District exists "on top" of the existing PC COM zoning, and therefore would allow for the housing to be constructed in lieu of, or in addition to, the existing shopping center and/or new commercial development.

The Housing Element identified the Enderle Center as having capacity for 413 housing units. The anticipated development density was determined through the Housing Element process and is a conservative estimate based on development trends in nearby communities. The anticipated development does not rely on the demolition of any existing building, but rather focuses on areas used for surface parking. No specific development is proposed as part of this Project, but this Draft EIR has analyzed all known anticipated impacts of the development of the proposed housing units. Table 3-2 lists the existing and proposed Project site land use regulation characteristics.

Table 3-2: Existing and Proposed Project Site Characteristics

	Existing			Proposed			
	GP Land Use	**Zoning Designation**	**Maximum Allowable Units**	**GP Land Use**	**Zoning Designation**	**Maximum Density (DU/AC)**	**Maximum Allowable Units**
Enderle Center	PCCB	PC COM	0	PCCB	PC COM & HO	59	413 on 7 aces

3.5.2 Buildout Development Summary

Residential uses are currently not allowed on the Project site. Upon approval of the HO, the Project site could accommodate 413 units over approximately 7 acres of developable land within the existing 11.8-acre site. This would result in a density of 59 du/ac. The Project site is envisioned to function as a mixed-use site and a portion of the Project site would remain as nonresidential land use. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB). The General Plan PCCB designation allows for development of up to Floor Area Ratio (FAR) 1.5:1. However, the General Plan assumes the average site to develop up to an FAR of 0.4:1. Based on the General Plan development assumption, the Project site is assumed to be developed with 205,610 SF of nonresidential use.

For purposes of the Project analysis, an Opening Year of 2029 has been assumed. The assumed buildout of the site by 2029 is broken down below, as shown in Table 3-3.

Table 3-3: Opening Year Buildout Summary

Land Use	Existing	Housing Overlay District	Opening Year Buildout (2029)
Residential (du)	-	413	413
Office (SF)	18,426	-	67,840
Retail (SF)	39,960	-	94,290
Restaurant (SF)	28,750	-	43,480
Total Residential	-	**413**	**413**
Total Nonresidential	**87,136**	-	**205,610**

3.5.3 Project Features

Proposed General Plan Amendment

The proposed Project includes a GPA establish that higher density residential uses are allowed in the Planned Community Commercial Business (PCCB) land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). The GPA will amend the text within the Land Use Element to clarify the purpose and function of a HO and describe how the HO implements General Plan goals and policies.

Proposed Housing Overlay District

During the Housing Element process, the City identified the Enderle Center as a suitable commercial site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. This would be accomplished with a Housing Overlay.

In addition to the permitted uses under the existing PC COM zoning, the overlay zone would allow residential land uses. Thus, the HO would be added "on top" of the existing PC COM zone (i.e., Base Zone). The overlay zone would also provide development standards related to parking, setbacks, height, and other standards applicable to residential uses. The HO text would include a provision that the HO supersedes the development standards and allowed uses listed within the Base Zone.

Residential uses are currently not allowed on the Project site. Upon approval of the HO, the Project site could accommodate 413 units over approximately 7 acres of developable land within the existing 11.8-acre site. This would result in a density of 59 du/ac. The anticipated development over 7 acres may take place on underutilized asphalt parking lot areas, and not require demolition of any existing buildings. Parking displaced as a result of redevelopment would be accommodated by vertical parking structures located within the proposed development.

Proposed Zone Change

The Project also includes an amendment to the City's Zoning Map to add the newly codified HO on top of the site's existing PC COM zoning. *Figure 3-6, Proposed Zoning,* illustrates the proposed zone change.

The proposed zone change would require an amendment to Tustin City Code (TCC), Article 9 (Land Use), Chapter 2 (Zoning), Part 5, to establish a HO, which allows for higher density residential development, and stipulates that Objective Design Standards (ODS) will apply to properties within the boundary of the Housing Overlay (HO) District.

Nonresidential Buildout

The Project site is envisioned to function as a mixed-use site and a portion of the Project site would remain as nonresidential land use. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB). The General Plan PCCB designation allows for development of up to Floor Area Ratio (FAR) 1.5:1. However, the General Plan assumes the average site to develop up to an FAR of 0.4:1. Based on the General Plan development assumption, the Project site is assumed to be developed with 205,610 SF of nonresidential use.

The Enderle Center is currently developed with 87,136 SF of commercial business uses, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, and 18,426 SF of office use. Therefore, the total remaining nonresidential use assumed for future buildout of the Project site is 118,474 SF.

Therefore, the Project anticipates the future additional nonresidential buildout of 118,474 SF, or a total nonresidential development capacity of 205,610 SF for the Project site. Future nonresidential projects proposed that are within the remaining development capacity of the site would be required to comply with the existing PCCB development standards and would the City's existing plan review process. Future nonresidential development is anticipated to be developed within exiting undeveloped areas, and the Project does not assume demolition of existing structures. No development is proposed as part of this rezone Project.

Housing Element Programs Applicable to the Project Site

The 2021-2029 Housing Element included several housing programs to be implemented during the 2021-2029 planning period. The discussion below outlines three programs that are applicable to the proposed Project.

Program 1.2a

Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in TCC Section 9272 (Design Review) and adopt new Objective Design Standards (ODS) to ensure that the City can provide clear guidance regarding project design, in order to streamline the development of high-quality residential development. The ODS would include provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a is anticipated to be complete in October 2024.

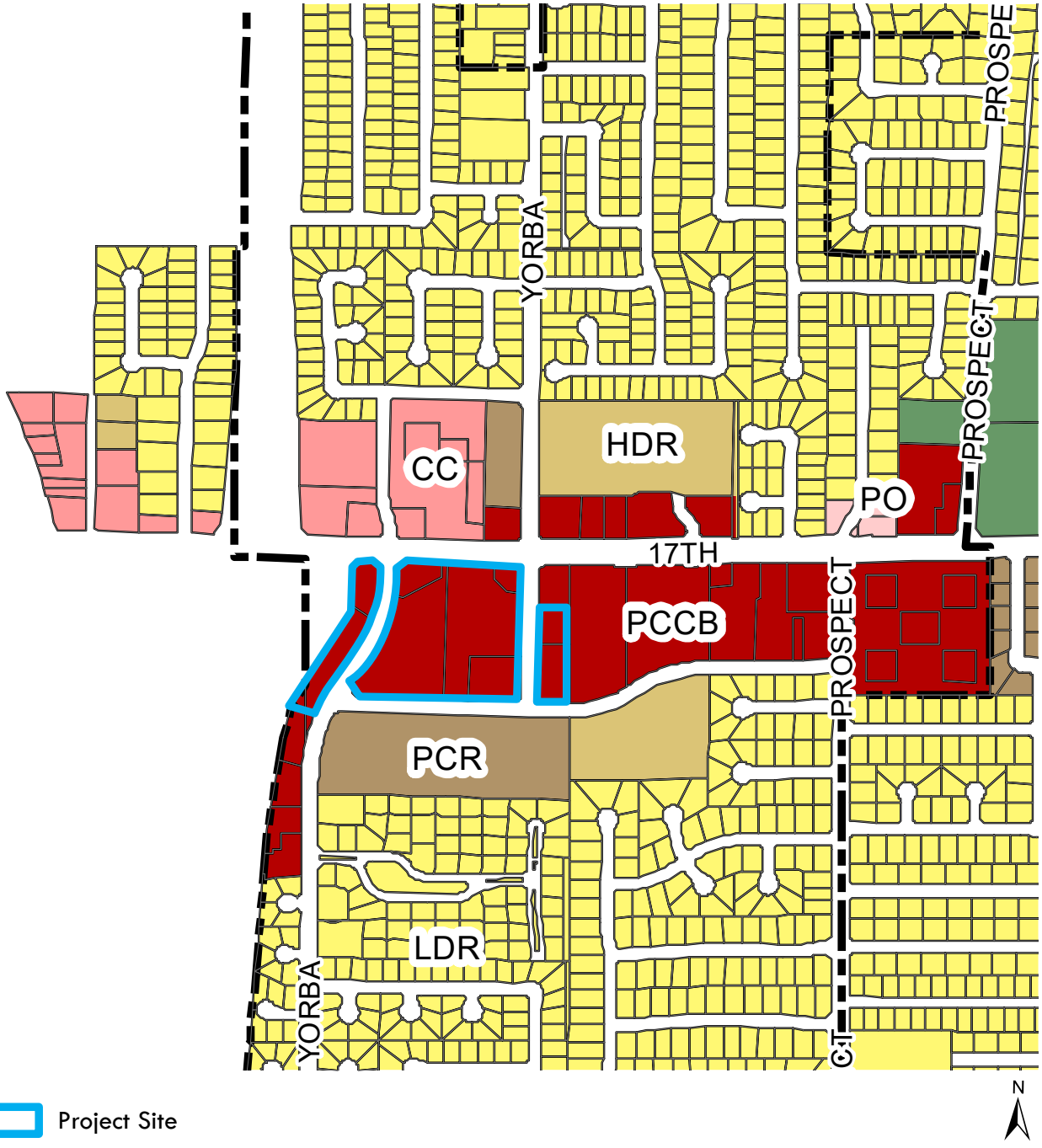
Program 1.2c

Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development, and allowance of parking structures and parking lifts, by right and subject to the ODS.

Infrastructure Improvements

Roadways and utilities may be required to support development of future residential construction within the Project site. Future onsite infrastructure improvements that may be necessary for residential development within the Enderle Center include storm drains, wastewater, water, and dry utilities that would connect to existing facilities within the Project site or adjacent to the Project area. Specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a specific development project is proposed.

Existing General Plan Land Use Designation



Project Site

PCCB - Planned Community Commercial/Business

CC - Community Commercial

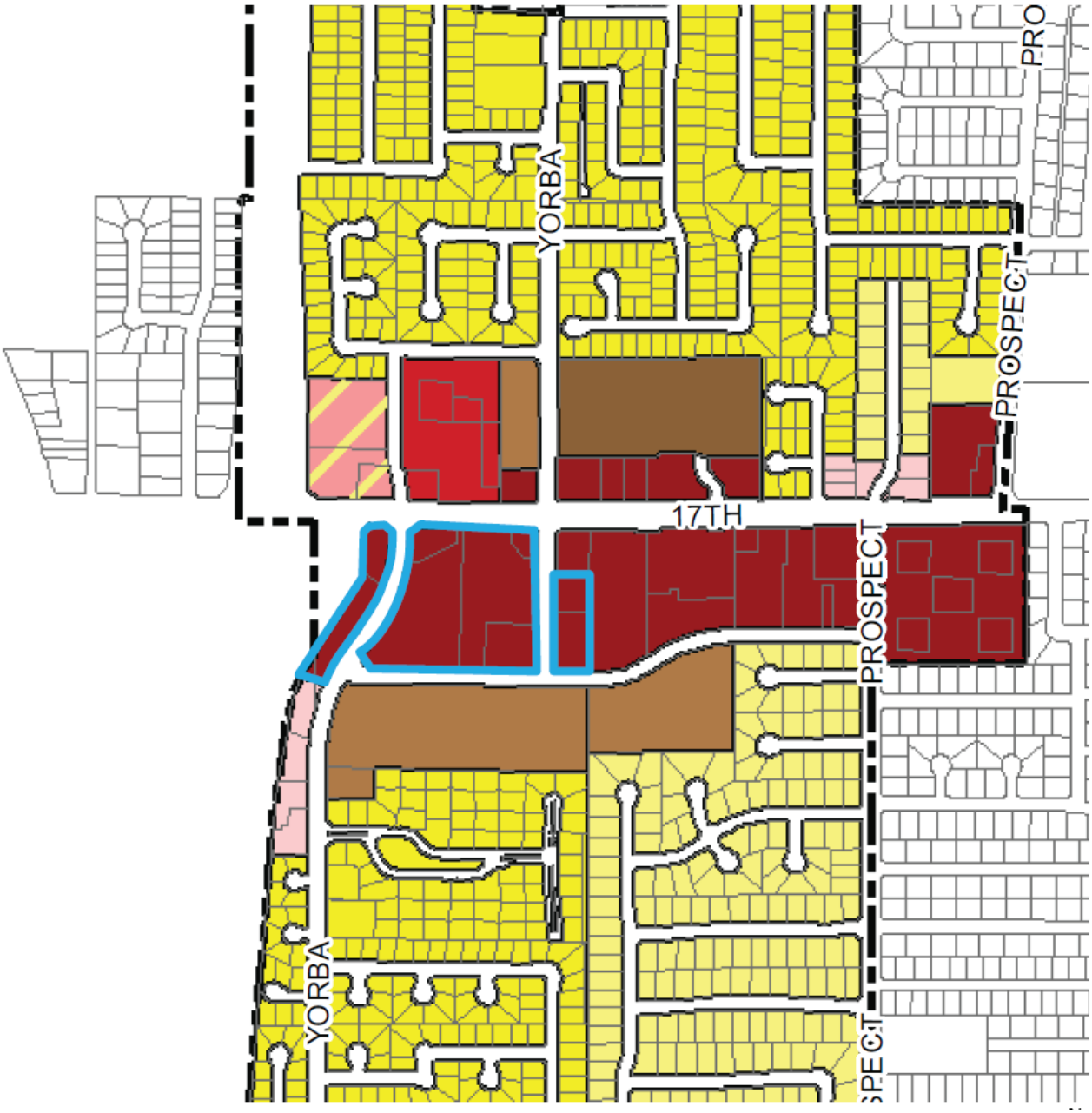
PCR - Planned Community Residential

HDR - High Density Residential

LDR - Low Density Residential

This page intentionally left blank.

Existing Zoning

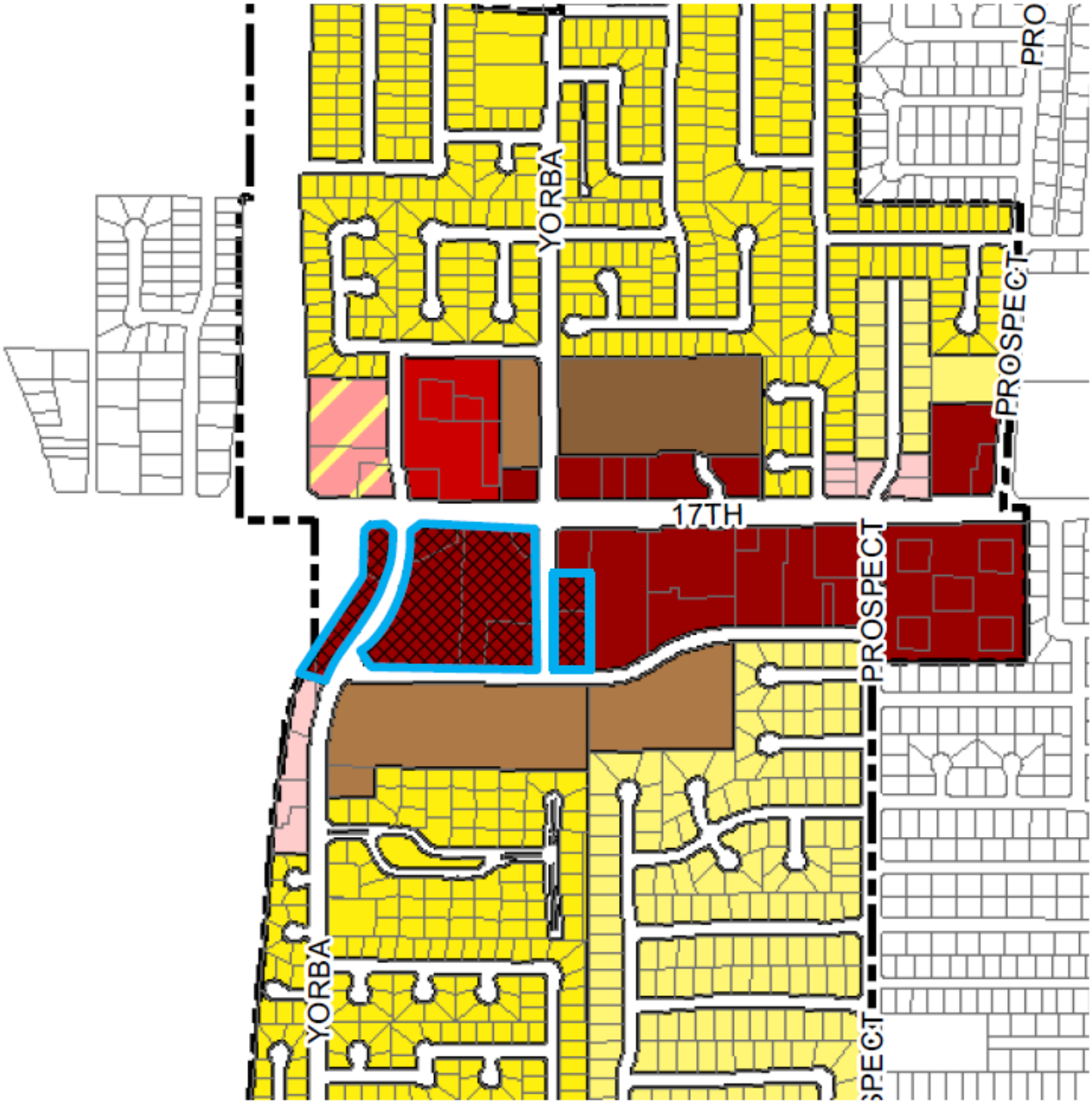


Project Site

- R1 - Single Family Residential
- R2 - Duplex Residential
- R3 - Multiple Family Residential
- R4 - Suburban Residential
- PC RES - Planned Community Residential
- PD - Planned Development
- MHP - Mobile Home Park
- PR - Professional
- C1 - Retail Commercial
- C2 - Central Commercial
- CG - Commercial General
- PC COM - Planned Community Commercial
- PM - Planned Industrial
- M - Industrial
- PC IND - Planned Community Industrial
- PI - Public and Institutional
- PCPI - Planned Community Public and Institutional

This page intentionally left blank.

Proposed Zoning



- Project Site
- R1 - Single Family Residential
- R2 - Duplex Residential
- R3 - Multiple Family Residential
- R4 - Suburban Residential
- PC RES - Planned Community Residential
- PD - Planned Development
- MHP - Mobile Home Park
- PR - Professional
- HO - Housing Overlay
- C1 - Retail Commercial
- C2 - Central Commercial
- CG - Commercial General
- PC COM - Planned Community Commercial
- PM - Planned Industrial
- M - Industrial
- PC IND - Planned Community Industrial
- PI - Public and Institutional
- PCPI - Planned Community Public and Institutional

Enderle Center Rezone Project
City of Tustin

Figure 3-6

This page intentionally left blank.

3.6 DISCRETIONARY APPROVALS AND PERMITS

Preparation of an EIR is anticipated for the Project. The City of Tustin has primary approval responsibility for the Project. As such, the City serves as the Lead Agency for the EIR pursuant to CEQA Guidelines §15050. The Tustin Planning Commission will evaluate the EIR and the Project and make a recommendation to the City Council whether the Project should be approved and the EIR be certified. The City Council is the decision-making authority for the Project and will consider the Project along with the Planning Commission's recommendations, and will make a final decision to approve, approve with changes, or deny the Project. The City, including the Planning Commission and the City Council, will consider the information in the EIR and the Project's administrative record in its decision-making processes. In the event of approval of the Project and certification of the EIR, the City would conduct administrative and discretionary review and grant ministerial and discretionary permits and approvals to implement Project requirements, conditions of approval, and future development within the Enderle Center.

Approval and implementation of the HO requires City approval of the following discretionary actions:

- Certification of the EIR;
- Adoption of the GPA to establish that higher density residential uses are allowed in the Planned Community Commercial Business (PCCB) land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP);
- Adoption of the ZCA to establish the zoning, development regulations, guidelines, and implementation provisions governing development of the HO;
- Approval of the HO for the Project site;
- Adoption of the zone change (ZC) to modify the City's Zoning Map to add the HO over the site's existing PC COM zoning.

The EIR may be used by various governmental decisionmakers for discretionary permits and actions that are necessary or may be requested in connection with implementation of future development projects pursuant to the Project. Additional discretionary, administrative, and/or ministerial actions may be necessary from other responsible agencies to fully implement the Project. The state or local agencies that may rely upon the information contained in the EIR when considering approval of permits may include the:

- Tustin Unified School District.

This page intentionally left blank.

4. Environmental Setting

The purpose of this section is to provide a description of the environmental setting of the Project site and surrounding area as it existed at the time of the Notice of Preparation (NOP) was published, from both a local and regional perspective. In addition to the summary below, detailed environmental setting descriptions are provided in each subsection of Section 5 of this Draft EIR.

4.1 REGIONAL SETTING

The Project site is located in the City of Tustin. The City of Tustin encompasses approximately 11.08 square miles and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. Regional access is provided by Interstate (I) 5 through the center of the City, State Route (SR) 55 to the west, SR-261 to the east, and I-405 freeway to the south.

4.2 LOCAL SETTING AND PROJECT LOCATION

The Project site is approximately 11.80 acres and is located within the City of Tustin. The Project site consists of Assessor Parcel Numbers (APNs) 401-251-04, -05, and -06; 401-252-05, -06, -08, -09, and -10; and 401-253-03 and -04. The Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by SR-55, including properties west of Yorba Street. The existing site and surrounding area is shown in Figure 3-2, *Local Vicinity*.

4.3 EXISTING LAND USE AND ZONING

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The PCCB land use designation provides opportunities for a variety of miscellaneous retail, professional office, and service-oriented business activities. The PC COM zoning is intended to allow diversification of the relationships of various buildings, structures and open spaces in planned building groups while ensuring substantial compliance with the district regulations and other provisions of the Planned Community District zone.

The Project site's existing General Plan land use and zoning designations are shown in Figure 3-4, *Existing General Plan Land Use* and Figure 3-5, *Existing Zoning*.

4.4 SURROUNDING LAND USES AND DEVELOPMENT

The Project site is located within a developed area. The surrounding land uses and their designations are described in Table 4-1.

Table 4-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
North	17th Street followed by commercial, residential and office uses	Community Commercial (CC), Planned Community Commercial/Business (PCCB)	Retail Commercial (C1) with Parking Overlay, Commercial General (CG), & Planned Community Commercial (PC COM)
East	Enderle Center Drive followed by office uses	Planned Community Commercial/Business (PCCB)	Planned Community Commercial (PC COM)
South	Vandenberg Lane followed by residential uses	Planned Community Residential (PCR)	Planned Community Residential (PC RES)
West	Tustin city limits and SR-55 freeway, followed by restaurants and office uses in the City of Santa Ana	Professional and Administrative Office (PAO) & General Commercial (GC) (*City of Santa Ana*)	Professional (P) & Community Commercial (C1) (*City of Santa Ana*)

4.5 PHYSICAL ENVIRONMENTAL CONDITIONS

CEQA Guidelines Section 15125(a)(1) states that the physical environmental condition in the vicinity of the Project as it existed at the time the EIR's NOP was released for public review normally be used as the comparative baseline for the EIR. The NOP for this EIR was released for public review on February 16, 2024. The following pages include a description of the physical environmental conditions ("existing conditions") on a regional and local basis at the approximate time the NOP was released. More information regarding the Project site's environmental setting is provided in the specific subsections of EIR Section 5, *Environmental Analysis*.

4.5.1 Air Quality

The Project area is located within the South Coast Air Basin (Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The ambient concentrations of air pollutants are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The topography and climate of Southern California combine to make the Basin an area of high air pollution potential. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is disrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. During the summer months, a warm air

mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions which produce ozone.

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the Project site is located at 1630 Pampas Lane in Anaheim, California.

Pollutant monitoring results for years 2020 to 2022 at the Anaheim ambient air quality monitoring station, shown in Table 5.1-3, indicate that air quality in the area has generally been moderate. As indicated in the monitoring results, the federal PM10 standard was not exceeded during the 3-year period. The State PM10 standard was exceeded 5 times in 2020, once in 2021, and once in 2022. Similarly, the federal PM2.5 standard had 12 exceedances in 2020, 10 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standards were exceeded 6 times in 2021, no times in 2021, and once in 2022. The State 8-hour ozone standards were exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standards were exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO2 standards were not exceeded in this area during the 3-year period. SO2 data was not available from 2020 to 2022 at air quality monitoring stations in Orange County.

Sensitive Land Uses

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. The Project site is surrounded primarily by residential, commercial, and office uses. The areas adjacent to the Project site include residential uses to the south, commercial uses to the north and east, and State Route 55 to the west.

The closest sensitive receptors to the Project site are residential uses, located approximately 70 feet south of the Project site (see Figure 2-3, *Aerial View*).

4.5.2 Energy

Electricity

The Southern California Edison Company (SCE) is the electrical purveyor in the City of Tustin. SCE provides electricity service to more than 14 million people in a 50,000 square-mile area of central, coastal and Southern California. California utilities are experiencing increasing demands that require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity and increase the grid's capacity. SCE is in the process of implementing infrastructure upgrades to ensure the ability to meet future demands. In addition, as described by the Edison International 2022 Annual Report, the SCE electrical grid modernization effort supports implementation of California requirements to achieve carbon neutrality by 2045. The State has set Renewables Portfolio Standards that require retail sellers of electricity to provide 60 percent of power from renewable resources by 2030. The State also requires sellers of electricity to deliver 100 percent of retail sales from carbon-free sources by 2045, including interim targets of 90 percent by 2035 and 95 percent by 2040. In 2022 approximately 48 percent of power that SCE delivered to customers came from carbon-free resources (Southern California Edison, 2022).

The Project site is currently served by the electricity distribution systems that exist along the roadways adjacent to the Project site.

Natural Gas

The Southern California Gas Company (SoCalGas) is the natural gas purveyor in the City of Tustin and is the principal distributor of natural gas in Southern California. The total natural gas consumption in Orange County in 2022 was 573 million therms (572,454,744 therms). SoCalGas estimates that gas demand will decline at an annual rate of 1.5 percent from 2022 to 2035 due to modest economic growth, mandated energy efficiency standards and programs, renewable electricity goals, and fuel substitution (Southern California Gas Company, et. al., 2022). The gas supply available to SoCalGas is regionally diverse and includes supplies from California sources (onshore and offshore), Southwestern U.S. supply sources, the Rocky Mountains, and Canada. SoCalGas designs its facilities and supplies to provide continuous service during extreme peak demands and has identified the ability to meet peak demands through 2035.

The Project is within the service area of Southern California Gas Company (SoCal Gas).

4.5.3 Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern with GHGs is that increases in their concentrations are contributing to global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential, and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG, with 22,800 times the global warming potential as CO_2. Therefore, an emission of one metric ton (MT) of SF_6 could be reported as an emission of 22,800 MT of CO_2e. Large emission sources are reported in million metric tons (MMT) of CO_2e. The principal GHGs are described below, along with their global warming potential.

The State emitted approximately 381.3 MMT CO2e emissions in 2021, 12.1 MMT CO2e higher than 2020 levels and 49.7 MMT CO2e below the 2020 GHG limit of 431 MMT CO2e. The California Air Resources Board (CARB) estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at approximately 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high Global Warming Potentials (GWP) such as refrigerants at 6 percent, and waste at 2 percent.

4.5.4 Land Use and Planning

The Project site is located within the City of Tustin, which is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. The approximately 11.8-acre Project site consists of the following parcels: Assessor Parcel Numbers (APNs) 401-251-04, -06; 401-252-05, -06, -08, -09, -10; and 401-253-04 and -03. The Enderle Center is currently developed with 87,136 SF of commercial business, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and

surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas.

The Project site has a General Plan land use designation of PCCB and a zoning designation of PC COM. The PCCB land use designation provides opportunities for a variety of miscellaneous retail, professional office, and service-oriented business activities. The PC COM zoning is intended to allow diversification of the relationships of various buildings, structures and open spaces in planned building groups while ensuring substantial compliance with the district regulations and other provisions of the Planned Community District zone.

4.5.5 Noise

Existing Noise Levels

To assess existing noise levels of the environment, long-term (24-hour) noise level measurements were conducted on January 23 and 24, 2024, at two locations as shown on Figure 5.5-1. The background ambient noise levels in the Project area are dominated by the transportation-related noise associated with surface streets and surrounding commercial and office uses. Table 5.5-4 provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown in Table 5.5-4 *Summary of 24-Hour Ambient Noise Level Measurem*ents, in Section 5.05, the calculated CNEL levels range from 66.9 dBA CNEL to 73.7 dBA CNEL.

Existing Vibration

Aside from periodic construction work that may occur in the vicinity of the Project area, the Project site and adjacent land uses are not currently exposed to sources of groundborne vibration.

Existing Airport Noise

John Wayne Airport (SNA) is located approximately 5.5 miles southwest of the Project site. The Project site is located outside of the airport's 60 CNEL noise contour. In addition, the General Aviation Noise Ordinance restricts airport operations between 11:00 p.m. and 7:00 a.m., to limit the hours of noise generated by SNA.

Sensitive Receivers

Sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include residences, schools, hospitals, and recreation areas. Existing offsite sensitive noise receptors where someone can remain for 24-hours in the vicinity of the Project site consists of residences. The closest offsite residences are located 70 feet south of the site as listed in Table 5.5-5, included within Section 5.05.

4.5.6 Population and Housing

The Project site is approximately 11.80 acres and is currently developed with 87,136 SF of commercial business, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas.

Population

According to the California DOF, the City of Tustin had a population of 79,558 in 2023 (California Department of Finance, 2023). Based on SCAG Connect SoCal methodology the City of Tustin had a population of 80,400 persons in 2019 and estimates that the City's population will increase to 93,317 in 2050, which is a 16.1 percent increase. In comparison, the SCAG projects the County of Orange will have a 7.8 percent increase in population between 2019 and 2050.

Housing

The California Department of Finance (DOF) estimates that the City of Tustin contained 28,405 housing units in 2023. The housing types in the City of Tustin compared to those in the entire County are provided in Table 5.6-3. As shown, the County has a higher percentage of detached single-family housing units and a lower percentage of single-family attached and multi-family housing units than the City. In addition, the California DOF details that the City had an average household size of 2.88 persons per household. In comparison, the County had an average household size of 2.83 persons per household.

The California DOF population and housing estimates for 2023 detail that the City of Tustin has a vacancy rate of 3.4 percent. In comparison, the vacancy rate Countywide is higher at 5.1 percent.

The SCAG estimates that between 2019 and 2050, the number of housing units in the City will increase by 25.9 percent while the number of housing units in the County will increase by 17.2 percent.

Employment

The City of Tustin is estimated to contain 51,700 employment opportunities as of 2019. The SCAG regional growth projections anticipate the number of jobs in the City of Tustin to increase by 37.9 percent to 71,300 jobs in the year 2050. In comparison, the County is projected to see a 11.9 percent increase in the number of jobs by 2050.

The SCAG 2019 Local Profile for Tustin identifies that 7.3 percent of Tustin residents work and live in the City, while 92.7 percent commute to other places (Southern California Association of Governments, 2019). Of the commuters residing in Tustin, the largest percentage commute to the City of Irvine (18.6 percent), Santa Ana (10.4 percent), Anaheim (5.5 percent), and Orange (5.2 percent).

Jobs-Housing Ratio

The jobs-housing ratio is a general measure of the total number of jobs and housing units in a defined geographic area, without regard to economic constraints or individual preferences. SCAG applies the jobs-housing ratio at the regional and subregional levels to analyze the fit between jobs, housing, and infrastructure. A major focus of SCAG's regional planning efforts has been to improve this balance. SCAG defines the jobs-housing balance as follows:

> Jobs and housing are in balance when an area has enough employment opportunities for most of the people who live there and enough housing opportunities for most of the people who work there. The region as a whole is, by definition, balanced…. Job-rich subregions have ratios greater than the regional average; housing-rich subregions have ratios lower than the regional average. Ideally, job-housing balance would… assure not only a numerical match of jobs and housing but also an economic match in type of jobs and housing.

There is no ideal ratio adopted in state, regional, or city policies. However, the American Planning Association includes recommends a target ratio of 1.5 jobs per housing unit; communities with more than 1.5 jobs per dwelling unit are considered jobs-rich; those with fewer than 1.5 are "housing rich," meaning that more

housing is provided than employment opportunities in the area (Weitz, 2003). A job-housing imbalance can indicate potential air quality and traffic problems associated with commuting. The projected 2050 jobs-to-housing ratios for the City of Tustin and Orange County are 2.1 and 1.61, respectively. This indicates that both the City of Tustin and Orange County are jobs-rich.

4.5.7 Public Services

Fire Protection Services

Fire protection and emergency medical services in the City of Tustin are provided by the OCFA through a contract for services. The Orange County Fire Authority (OCFA) provides fire suppression, emergency medical, rescue, fire prevention, hazardous materials coordination, and wildland management services. OCFA serves 23 cities in Orange County and all unincorporated areas. Within the City of Tustin, OCFA provides services from three fire stations. Additionally, there are four fire stations in the City of Santa Ana and unincorporated Orange County within service distance from the Project site.

The Project site is within the Primary Responsibility Area of OCFA Station 21, which is located approximately 2 miles from the site. However, resources are deployed upon a regional service delivery system, assigning personnel and equipment to emergency incidents without regard to jurisdictional boundaries. Therefore, the site may be served by other OCFA stations in the vicinity. These include OCFA Station 72, located approximately 1.6 miles from the Project site; OCFA Station 70, located approximately 1.8 miles from the Project site; OCFA Station 75, located approximately 3.3 miles from the site; and OCFA Station 8, located approximately 3.6 miles from the site. The location, equipment, and staffing of the fire stations that would serve the Project site are provided in Table 5.7-1, included within section 5.07.

Table 5.7-2 shows that there were 16,276 incident totals from the three fire stations in the City of Tustin in 2022. Of the calls for service, 70 percent (11,397) were for emergency medical calls, 1.5 percent (237) were for fire incidents, and 28.5 percent (4,642) were for other incidents, which includes: cancelled service calls, ruptures, hazardous conditions, false alarms, and miscellaneous calls.

According to the Table PS-3, Emergency Service Standards, of the Tustin General Plan, Tustin has a target response time of 5 minutes for 90 percent of incidents related to fire response and basic life support unit responses. The standard response time for the advanced life support unit is 10 minutes for 90 percent of incidents (City of Tustin, 2018).

OCFA's current response standards are based on a 90th Percentile. The OCFA current standard for response is 8:30 minutes at the 90th percentile. Table 5.11-2 provides a summary of service and response metrics for the closest responding stations to the Project site in 2023. According to OCFA, in 2023, OCFA first unit on scene response at the 90th percentile to the project area was 8:35 minutes

Police Services

The Tustin Police Department provides police services throughout the City. Police Department headquarters are located at 300 Centennial Way, Tustin, CA 92780, which is approximately 1.7 roadway miles southeast from the Project site. As of May 2024, the Tustin Police Department has 83 full time Sworn Police Officers, 7 part time Sworn Officers, 44 full time civilian support personnel and 12 part time civilian support personnel. According to the California Department of Finance, the City of Tustin had a population of 78,559 residents in 2023 (California Department of Finance, 2023). Based on this population estimate, the City's sworn officer to population ratio is 1.1 officers per 1,000 population.

According to the Table PS-3, Emergency Service Standards, of the Tustin General Plan, the Tustin Police Department has a target response time of 3.5 minutes for emergency calls and 13 minutes for non-emergency calls (City of Tustin, 2018).

Tustin Police Department groups calls for service into four priority categories, described below.

- Priority 1: Immediate threat to life or significant threat to public safety. Priority 1 calls are dispatched immediately.
- Priority 2: Crimes in progress or other calls for service with a potential threat to public safety that do not rise to the level of a Priority 1 call. These calls are dispatched as soon as possible.
- Priority 3: Calls for service with a reporting party who is waiting for an officer.
- Priority 4: Report calls with a delay in reporting and limited suspect information.

Average response times for each call type between January 1, 2023, to December 31, 2023, City wide are provided below.

- Priority 1 – 00:05:43
- Priority 2 – 00:14:25
- Priority 3 – 00:42:27
- Priority 4 – 00:53:36

School Services

The Project site is located within the Tustin Unified School District (TUSD) boundary which includes the City of Tustin, portions of the City of Irvine and portions of unincorporated areas of Orange County. TUSD has a total of 29 schools including: 16 elementary schools, two Kindergarten through 8th-grade schools, one Kindergarten through 12th-grade online school, four middle schools, one 6th-grade through 12th-grade academy, four high schools, and one adult education school.

According to the data from California Department of Education, TUSD has an enrollment of 21,830 students in the 2022/2023 school year (California Department of Education, 2024). The Project site is in the attendance areas of Guin Foss Elementary School (18492 Vanderlip Ave), which is approximately 1.3 roadway miles and 1.0 linear miles from the Project site; Columbus Tustin Middle School (17952 Beneta Way), which is approximately 1.1 roadway miles and 0.7 linear miles from the Project site; and Foothill High School (19251 Dodge Ave), which is approximately 2.2 roadway and 1.7 linear miles from the Project site (PowerSchool, 2024).

Other Public Facilities

The Orange County Public Library (OCPL) provides library services to the City, including the Project site. OCPL has 33 branch libraries in 24 incorporated cities and unincorporated areas of Orange County and has a system-wide collection of approximately 2.5 million items (Orange County Public Libraries, 2020). The City of Tustin has one branch library operated by OCPL: the Tustin Library, located at 345 East Main Street, approximately 1.7 roadway miles southeast of the Project site.

4.5.8 Recreation

According to the City's General Plan, in 2011, the City had 113 acres of existing local and community parks, but needed an additional 114 acres to serve its population based on a standard of 3 acres per 1,000 persons and the January 2011 City population of 75,781 (City of Tustin, 2018). According to the City Parks and Recreation Director, the City of Tustin currently has 183.2 acres of parkland (C. Clanton, personal

communication, 2024 March 18). As discussed in Section 5.10, *Population and Housing,* the City had a population of 77,558 in 2023. Therefore, the City has approximately 2.36 acres of public park and/or recreational space per 1,000 residents. Thus, the City of Tustin is currently parkland deficient and is not meeting its City standard of three acres of parkland per 1,000 residents. However, the City is currently in the design phase for a new joint-use park at Heideman School (15571 Williams Street) that is expected to completed in 2026 that will contribute to the City's existing parkland (City of Tustin, 2024).

There are no existing parks within the Project site. The closest existing park and recreation facilities to the Project site (within 2 miles) in the City of Tustin are listed in Table 5.8-1. As shown, the City currently has three existing parks that provide 20.4 acres of parkland within 2 miles of the Project site.

4.5.9 Transportation

Existing Roadway Network

The public roadway network serving the Project site includes 17th Street, Yorba Street, Enderle Center Drive, Vandenburg Lane, and SR-55, which are described below.

- **17th Street** is a six-lane divided roadway with sidewalks on both sides that is designated as a major arterial in the City of Tustin General Plan. 17th Street is oriented in the east-west direction, has no bike lanes, and has a posted speed limit of 40 miles per hour (mph). On-street parking is not permitted on either side of this roadway.
- **Yorba Street** is a four-lane undivided roadway between 17th Street and Vandenberg Lane and is oriented in the north-south direction with sidewalks on both sides. The roadway is designated as a secondary arterial in the City of Tustin General Plan and the posted speed limit is 40 mph. On-street parking is not permitted along this roadway and there are no bike lanes.
- **Enderle Center Drive** is a two-lane undivided roadway between 17th Street and Vandenberg Lane and is undesignated in the General Plan. Enderle Center Drive is oriented in the north-south direction, has no bike lanes, has a posted speed limit of 40 mph, and has a sidewalk on the east side.
- **Vandenberg Lane** is a two-lane undivided roadway between Yorba Street and Enderle Center Drive and is undesignated in the General Plan. The roadway is aligned in an east-west direction, has sidewalks on both sides of the street, and has a posted speed limit of 35 mph. On-street parking is permitted along this roadway.
- **SR 55** is a 12-lane divided roadway oriented regionally in the north-south direction. The posted speed limit on SR-55 is 55 mph and it is classified as a freeway in the General Plan. On-street parking is not permitted along this roadway.

Existing Site Access

Vehicular access to the Project site is currently provided via unsignalized driveways along 17th Street, Yorba Street, Vandenberg Lane, and Enderle Center Drive. Signalized access is provided on Yorba Street at the intersection of Vandenberg Lane.

Existing Transit Service

Public transit bus service for the City is provided by the Orange County Transportation Authority (OCTA). The established network includes Routes 60, 61, 65, 66, 71, 75 and 463. The Project is not located within a Transit Priority Area (TPA); however, adjacent to the Project at the junction of 17th Street and Enderle Center Drive, there are two existing public transit bus stations served by Route 60 with bus service every 30 minutes. These stations are situated on both the northern side of 17th Street and Yorba Street and on the southern side of 17th Street and Enderle Center Drive. The major routes of travel for Route 60 include Larwin Square

to Long Beach, via Newport and Seventeenth. Route 60 operates on approximately 30-minute headways on weekdays and weekends and connects to the Newport Transportation Center.

The Metrolink Orange County Line and the Inland Empire-Orange County commuter lines travel through Tustin, with stops at the Santa Ana Metrolink Station located 1.7 miles west of the Project site, and the Orange Metrolink Station located 2.5 miles northwest of the Project site. In addition, passenger rail service is provided from two Amtrak depots in neighboring cities; Irvine to the east and Santa Ana to the west, which connects travelers throughout California, including to neighboring communities in Los Angeles and San Diego counties.

Existing Bicycle and Pedestrian Facilities

There are no bike lanes on the public roadway network currently serving the Project site. Sidewalks currently exist on both sides of 17th Street, Vandenburg Lane, and Yorba Street and on the northbound side of Enderle Center Drive.

Existing Vehicle Miles Traveled

The Project site is currently vacant and undeveloped. The Project site is located in one low VMT area (per capita), which is defined as a traffic analysis zone (TAZ). The City of Tustin average city-wide VMT under the 2016 Base Model Year is 15.0 home-based VMT per capita and 25.1 home-based work VMT per employee. The Project site currently generates regular vehicle trips, comprised of 7,058 daily trips, with 444 trips in the AM peak hour and 648 trips in the PM peak hour.

4.5.10 Tribal Cultural Resources

A records search from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton was completed and encompassed the Project site and a 500-foot buffer surrounding the Project (BFSA Environmental Services, 2024). Based on the records search results, no resources are recorded within the Project site or within the 500-foot search buffer. Additionally, no previous studies are recorded on the property, although there are two studies recorded within the search area. However, neither of the two studies are directly related to the Project site.

Sacred Lands File Search

TCRs can include archaeological sites, built environment resources, locations of events or ceremonies, resource procurement areas, and natural landscape features with special significance to one or more indigenous groups. The City requested a Sacred Lands File (SLF) Search from the Native American Heritage Commission (NAHC) and received the results on October 19, 2023. The SLF returned negative results, indicating that no known tribal resources are located within the Project area.

4.5.11 Utilities and Service Systems

Water Supply and Demand

Water is supplied to the Project site by the City of Tustin. The City is a retail water supplier that provides water to its residents and other customers using the imported potable water from Municipal Water District of Orange County (MWDOC), obtained through East Orange County Water District (EOCWD), and local groundwater from the Orange County Groundwater Basin (OC Basin), which is managed by the Orange County Water District (OCWD) (Arcadis U.S., Inc. , 2020).

The City's water supply consists of a combination of imported water and local groundwater. The City's main source of water supply is groundwater from the OC Basin. In 2020, the City's actual water supply totaled 10,447 acre-feet (AF), which included 7,034 AF of untreated groundwater and 3,038 AF desalinated groundwater from OC Basin, and 375 AF of imported water from MWDOC/EOCWD.

The City's 2020 UWMP forecasts that by 2045 the City's water supply mix will shift to 85 percent groundwater and 15 percent imported water. Table 5.11-1 provides the City's total projected water supply capacities expected to be available through 2045.

The City's water demand in 2021 was 10,374 AF, and is projected to decrease to 10,081 AF by 2025 (Arcadis U.S., Inc. , 2020). The 2020 UWMP also describes that water demands per capita have been decreasing in recent years due to new state and local regulations related to water conservation. The 2020 UWMP describes that Tustin Water Department customers used 95 gallons per capita per day (GPCD) in 2020, which is below the target of 151 GPCD for 2020 (Arcadis U.S., Inc. , 2020). As shown in Table 5.15-2, the 2020 UWMP indicates that the City has supply capabilities that would be sufficient to meet demands from 2025 to 2045 under the normal, single dry-year, and multiple dry years. Thus, the City would continue to be able to utilize imported water supply as needed.

Groundwater: In Fiscal Year (FY) 2019-20, the City relied on approximately 10,072 AFY (approximately 96 percent of the City's water supply portfolio for FY 2019-20) from the OC Basin to meet its demands. The OC Basin covers an area of approximately 350 square miles, bordered by the Puente Hills and Chino Hills to the north, the Santa Ana Mountains to the northeast, and the Pacific Ocean to the southwest. The basin boundary extends to the Orange-Los Angeles county line to the northwest. Replenishment supplies for the OC Basin include capture of increasing Santa Ana River flows, purified recycled water, purchases of replenishment water from Metropolitan, and expansion of local supplies.

Imported Water: Approximately 4 percent of the City's potable water needs are met by imported water purchased from EOCWD (who purchases from the Metropolitan Water District of Southern California [MET] through MWDOC). MET's principal sources of water are the Colorado River via the Colorado River Aqueduct (CRA) and the Lake Oroville watershed in Northern California through the State Water Project (SWP).

Surface Water: Currently, there are no direct surface water uses in the City's service area. As of 2021, there are no planned direct uses of surface water in the City's service area (Arcadis U.S., Inc. , 2020).

Recycled Water: There are currently no direct recycled water uses within the City's service area.

Water Exchanges and Transfers: The City maintains interconnections with other agencies result in the ability to share water supplies during short term emergency situations or planned shutdowns of major imported water systems. Currently, the City maintains four emergency interconnections with Golden State Water Company, the City of Santa Ana, and Irvine Ranch Water District. All four connections are six inches in diameter, need to be manually activated, and supply flow in both directions.

Water Infrastructure

The City operates 13 wells, six reservoirs with a combined storage capacity of approximately 13.83 million gallons (MG) and manages a 172-mile water mains system with 14,341 service connections (Arcadis U.S., Inc. , 2020)

Wastewater

Wastewater services are provided to the Project site by East Orange County Water District (EOCWD). In 2020, EOCWD collected approximately 360 AF of wastewater (Arcadis U.S., Inc., 2020).

EOCWD's sewer system service area encompasses about 7,780 acres and includes portions of the Cities of Orange and Tustin and unincorporated communities of North Tustin, Lemon Heights, Cowan Heights, and Panorama Heights in the County of Orange.

EOCWD's wastewater system includes 171 miles of sewer lines and 3,700 manholes, serving about 18,000 customers. The gravity collection system conveys wastewater to points of connection with the wastewater systems owned by the City of Orange, Irvine Ranch Water District (IRWD), and OC San.

EOCWD coordinates with Orange County Sanitation District (OC San) and OCWD for wastewater and recycled water services. EOCWD does not own or operate its own wastewater treatment facilities and sends all collected wastewater to OC San for treatment and disposal. Wastewater collected within EOCWD's service area is conveyed to OC San's wastewater treatment plants in Fountain Valley (Plant No. 1) and Huntington Beach (Plant No. 2). Plant No. 1 has a total rated primary capacity of 108 MGD and a secondary treatment capacity of 80 MGD. Plant No. 2 has a rated primary capacity of 168 MGD and secondary treatment capacity of 90 MGD.

Wastewater from the Project site is treated at OC San's Plant No. 1 in Fountain Valley. Enderle Center is currently served by the existing 8-inch diameter sewer lines in 17th Street, Yorba Street, Enderle Center Drive, and Vandenberg Lane

Storm Drainage Facilities

The Project site is currently developed with commercial uses. The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains. Stormwater drains to the southeast corner of the site into a catch basin at the Vanderberg Lane and Enderle Center Drive intersection. The storm drain then continues east and connects to the existing Orange County Flood Control District (OCFCD) facility located between Enderle Center Drive and Prospect Avenue. Because the site is currently almost entirely paved, future development would increase intensity of development, but would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff.

Solid Waste

The two closest landfills to the Project site are the Frank R. Bowerman Landfill in Irvine and the Olinda Alpha Sanitary Landfill in Brea. The Frank R. Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In January 2024, the maximum tonnage received was 8,710.78 tons. Thus, the facility had additional capacity of 2,789.22 tons per day (CalRecycle, 2024). Per a Solid Waste Facility Permit (SWFP) issued on July 8, 2021, the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. The Olinda Alpha Sanitary Landfill is permitted to operate through 2036. In January 2024, the maximum tonnage received was 8,404 tons, which is below the 10,000 tons per day that the facility is allowed to receive for 36 days of the year (CalRecycle, 2024). Thus, the Olinda Alpha Sanitary Landfill has additional capacity to accept solid waste that may be generated by the Project.

Electrical, Natural Gas, and Telecommunications Facilities

Electricity

Electricity is provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons within its 50,000 square mile service area. According to SCE's 2022 Power Content Label Mix, SCE derives electricity from varied energy resources including: biomass and biowaste, geothermal, hydroelectric, solar, wind, nuclear, and natural gas. SCE also purchases power from independent power producers and utilities, which includes out-of-state providers (California Energy Commission, 2022).

Natural Gas

Natural gas would be provided to the Project by the Southern California Gas Company (SoCal Gas). SoCalGas provides natural gas to more than 21 million persons within its 24,000 square mile service area (SoCalGas, 2024).

Telecommunications

Telecommunications would be provided to the Project by AT&T and Cox Communications.

4.6 REFERENCES

Airport Land Use Commission for Orange County. (2008, April). *Airport Land Use Commission*. Retrieved from John Wayne Airport Orange County: https://www.ocair.com/about/administration/airport-governance/commissions/airport-land-use-commission/

Arcadis U.S., Inc. . (2020). *Tustin 2020 Urban Water Management Plan* .

Arcadis U.S., Inc. (2020). *East Orange County Water District 2020 Urban Water Management Plan*.

BFSA Environmental Services. (2024). *Archaeological Resources Records Search Results for the Enderle Center Project, Tustin, California (APNs 401-252-05, -06, -08, through -10, 401-253-03, and -04)*.

California Department of Education. (2024). *Data Quest*. Retrieved from 2022-23 Enrollment by Grade: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=3073643&agglevel=district&year=2022-23

California Department of Finance. (2023, May). *E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2023*. Retrieved from State of California Department of Finace.

California Energy Commission. (2022). *2022 Power Content Label Southern California Edison*. Retrieved from California Energy Commission: https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure-program/power-content-label

CalRecycle. (2024). *SWIS Facility/Site Summary Frank R. Bowerman Landfill (30-AB-0360)*. Retrieved from CalRecycle: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/2103

CalRecycle. (2024). *SWIS Facility/Site Summary Olinda Alpha Landfill (30-AB-0035)*. Retrieved from CalRecycle: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/2093

City of Tustin. (2018). *City of Tustin General Plan*.

City of Tustin. (2024). *City of Tustin Parks & Recreation Director, Chad Clanton*. Retrieved from City of Tustin.

City of Tustin. (2019). *Parks Information*. Retrieved from Tustin Parks and Recreation: https://www.tustinca.org/715/Parks-Information

Federal Transit Administration. (2006). *Transit Noise and Vibration Impact Assessment*. Retrieved from Department of Transportation: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://docs.vcrma.org/images/pdf/planning/ceqa/FTA_Noise_and_Vibration_Manual.pdf

LSA. (2024). *Noise and Vibration Impact Analysis Enderle Center Project*

Governor's Office of Planning and Research (OPR). (2005). *State of Califonria Tribal Consultation Guidlines*.

PowerSchool. (2024). *Tustin Unified School District*. Retrieved from MySchool Locator: https://locator.pea.powerschool.com/?StudyID=215986

SoCalGas. (2024). *Company Profile*. Retrieved from SoCalGas: https://www.socalgas.com/about-us/company-profile

Southern California Association of Governments. (2024, April). *2024–2050 Regional Transportation Plan/Sustainable Communities Strategy*. Retrieved from https://scag.ca.gov/connect-socal

Southern California Association of Governments. (2019, May). *Local Profiles*. Retrieved from Southern California Association of Governments: https://scag.ca.gov/data-tools-local-profiles

Southern California Gas Company, et. al. (2022). *2022 California Gas Report*. Retrieved from Southern California Gas Company: https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf

Weitz, J. (2003). *Jobs-Housing Balance. Planning Advisory Service Report Number 516*. American Planning Association.

5. Environmental Impact Analysis

This chapter examines the environmental setting of the Project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter is divided into subsections for each environmental issue area that was determined to need further study in the Draft EIR through the Notice of Preparation (NOP) review and comment process (see Appendix A). Environmental topic areas discussed in this Draft EIR include the following:

5.1 Air Quality
5.2 Energy
5.3 Greenhouse Gas Emissions
5.4 Land Use and Planning
5.5 Noise
5.6 Population and Housing
5.7 Public Services
5.8 Recreation
5.9 Transportation
5.10 Tribal Cultural Resources
5.11 Utilities and Service Systems

This Draft EIR evaluates the direct and indirect impacts resulting from the planning, construction, and operations of the Project. Under CEQA, EIRs are intended to focus their discussion on significant impacts and may limit discussion of other impacts to a brief explanation of why the impacts are not significant.

FORMAT OF ENVIRONMENTAL TOPIC SECTIONS

Each environmental topic section generally includes the following main subsections:

- **Introduction.** This subsection describes the purpose of analysis for the environmental topic and referenced documents used to complete the analysis. This subsection may define terms used.
- **Regulatory Setting.** This subsection describes applicable federal, State, and local plans, policies, and regulations that the Project must address and may affect its implementation.
- **Environmental Setting.** This subsection describes the existing physical environmental conditions (environmental baseline) related to the environmental topic being analyzed.
- **Thresholds of Significance.** This subsection sets forth the thresholds of significance (significance criteria) used to determine whether impacts are "significant." The thresholds of significance used to assess the significant of impacts are based on those provided in Appendix G of the CEQA Guidelines.
- **Methodology.** This subsection provides a description of the methods used to analyze the impact and determine whether it would be significant or less than significant.
- **Environmental Impacts.** This subsection provides an analysis of the impact statements for each identified significance threshold. The analysis of each impact statement is organized as follows:
  - A statement of the CEQA threshold being analyzed.
  - The Draft EIR's conclusion as to the significance of the impact.
  - An impact assessment that evaluates the changes to the physical environment that would result from the Project.
  - An identification of significance comparing identified impacts of the Project to the significance threshold with implementation of existing regulations, prior to implementation of any required mitigation.
- **Cumulative Impacts.** This subsection describes the potential cumulative impacts that would occur from the Project's environmental effects in combination with other cumulative projects (See Table 5-1).
- **Existing Regulations and Regulatory Requirements.** This subsection describes a list of applicable laws and regulations that would reduce potentially significant impacts.
- **Level of Significance Before Mitigation.** This subsection describes a determination of the significance of the impacts after the application of existing regulatory requirements and prior to any mitigation.

- **Mitigation Measures.** For each impact determined to be potentially significant after the application of applicable laws and regulations, feasible mitigation measure(s) to be implemented are provided. Mitigation measures include enforceable actions to:
  - Avoid a significant impact;
  - Minimize the severity of a significant impact;
  - Rectify an impact by repairing, rehabilitating, or restoring the effected physical environment;
  - Reduce or eliminate the impact over time through preservation and/or maintenance operations during the life of the Project; and/or
  - Compensate for the impact by replacing or providing substitute resources or environmental conditions.
- **Level of Significance After Mitigation.** This section provides the determination of the impact's level of significance after the application of regulations, regulatory requirements, and mitigation measures.

IMPACT SIGNIFICANCE CLASSIFICATIONS

The below classifications are used throughout the impact analysis in this Draft EIR to describe the level of significance of environmental impacts. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines.

- **No Impact.** The Project would not change the environment.
- **Less than Significant.** The Project would not cause any substantial, adverse change in the environment.
- **Less than Significant with Mitigation Incorporated.** The Draft EIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and Unavoidable.** The Project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less-than-significant level.

CUMULATIVE IMPACTS

Cumulative impacts refer to the combined effect of the proposed Project's impacts with the impacts of other past, present, and reasonably foreseeable probable future projects. Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the CEQA Guidelines Section 15130(b), "the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." The CEQA Guidelines direct that the discussion should be guided by practicality and reasonableness and focus on the cumulative impacts that would result from the combination of the proposed project and other projects, rather than the attributes of other projects which do not contribute to cumulative impacts.

According to Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts:

a) The individual effects may be changes resulting from a single project or a number of separate projects.
b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Therefore, the cumulative discussion in this Draft EIR focuses on whether the impacts of the proposed Project are cumulatively considerable within the context of impacts caused by other past, present, and reasonably

foreseeable future projects. Additionally, pursuant to the CEQA Guidelines Section 15130(a)(1), an EIR should not discuss cumulative impacts that do not result at least in part from the project being evaluated in the EIR. Thus, cumulative impact analysis is not provided for any environmental issue where the proposed Project would have no environmental impact. Analysis of cumulative impacts is, however, provided for all Project impacts that are evaluated within this Draft EIR.

CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of the following, or a reasonable combination of the two:

- A list of past, present, and probable future projects producing related or cumulative impacts, including those projects outside the control of the lead agency; or
- A summary of projections contained in an adopted local, regional, or statewide plan or related planning document that describes or evaluates conditions contributing to the cumulative effect.

The cumulative analysis for air quality, greenhouse gas emissions, and transportation relies on projections contained in adopted local, regional, or statewide plans or related planning documents, such as the Southern California Regional Transportation Plan and relevant regional plans developed by the Southern California Association of Governments (SCAG). The cumulative analyses for other environmental issues use the list of projects approach which identifies past projects which have recently been constructed, present projects which have recently been approved and are under construction, and probable future projects that are under entitlement review that were known of at the time the NOP was published. As described previously, the cumulative project list is part of the environmental setting/baseline that includes past, present, and probable future projects for which development applications were submitted to lead agencies prior to publishing of the NOP.

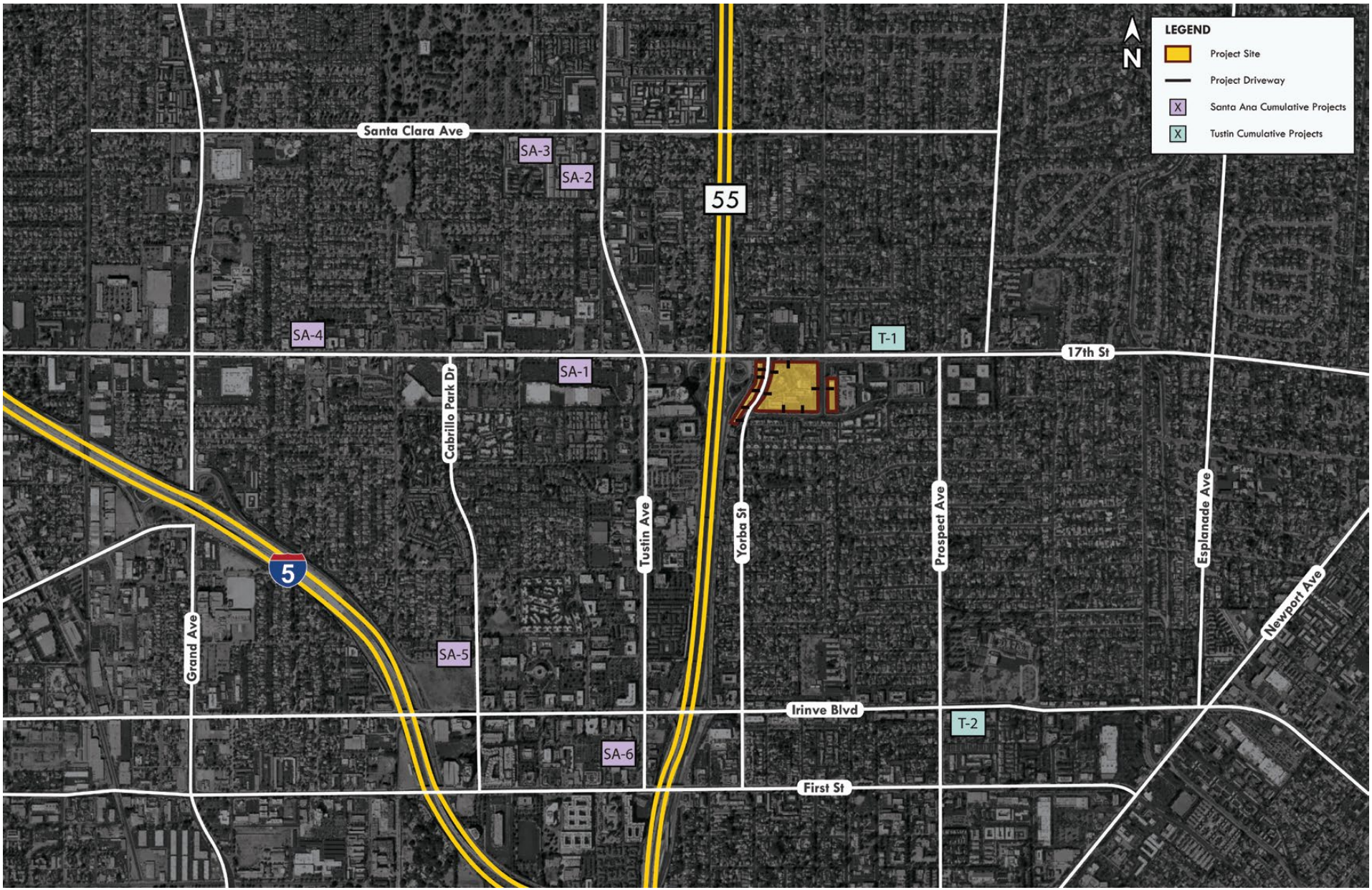
Different types of cumulative impacts occur over different geographic areas. For example, the geographic scope of the cumulative air quality analysis, where cumulative impacts occur over a large area, is different from the geographic scope considered for cumulative analysis of aesthetic resources, for which cumulative impacts are limited to project area viewsheds. Thus, in assessing aesthetic resources impacts, only development within and immediately adjacent to the Project area would contribute to a cumulative visual effect is analyzed, whereas cumulative transportation impacts are based upon annual growth projections and the other proposed and/or foreseeable development within the traffic study area of roadways and intersections. Because the geographic scope and other parameters of each cumulative analysis discussion can vary, the cumulative geographic scope, and the cumulative projects included in the geographic scope (when the list of projects approach is used), are described for each environmental topic. Table 5-1 provides a list of projects considered in this cumulative environmental analysis, which was compiled per information provided by each agency, and Figure 5-1 shows the locations.

Table 5-1: Cumulative Projects List

No.	Project	Address	Land Use	Size
City of Tustin				
T-1	Medical Office Bldg.[1]	17631 17th St Tustin, CA	Institution	12,320 SF
T-2	Jessup by Intracorp[2]	17802 & 17842 Irvine Blvd Tustin, CA	SFR & MFR	SFR: 4 DU MFR: 36 DU
City of Santa Ana				
SA-1	Baja Fish Tacos	2107 17th Street Santa Ana, CA	Commercial	5,005 SF
SA-2	Tustin Service Station	2230 Tustin Ave, Santa Ana, CA	Commercial	2,150 SF

No.	Project	Address	Land Use	Size
SA-3	McDonald's Drive-Through[1]	2101 Santa Clara Ave Santa Ana, CA	Commercial	3,975 SF
SA-4	New ARCO AM/PM Service Station[1]	2301 Seventeenth Street Santa Ana, CA	Commercial	4,000 SF
SA-5	Park Court Office Building	1801 Parkcourt Place Santa Ana, CA	Institution	3,974 SF
SA-6	Russell Fischer Center[1]	301 Tustin Ave Santa Ana, CA	Commercial	10,143 SF

Notes: Multi-Family Residential (MFR). Single Family Residential (SFR). SF = square feet. DU = dwelling units.
[1] The project includes demolition and replacement of an existing use (non-vacant).
[2] Project size indicates the added units and/or square feet where expansion of existing facilities is proposed, not the total operational size.



Enderle Center Rezone Project
City of Tustin

Figure 5-1

This page intentionally left blank.

5.1 Air Quality

5.1.1 INTRODUCTION

This section provides an overview of the existing air quality within the City of Tustin and surrounding region, a summary of applicable regulations, and analyses of potential short-term and long-term air quality impacts from implementation of the proposed Project. Mitigation measures are recommended as necessary to reduce significant air quality impacts. This section is based upon the following.

- *City of Tustin General Plan* (including 2021-2029 Housing Element). Adopted November 2018 (updated October 2022).
- *Tustin City Code*
- *Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*, adopted April 2024.
- *Enderle Center Project Air Quality, Energy, and Greenhouse Gas Report*, LSA, March 2024, Appendix B.

5.1.2 REGULATORY SETTING

5.1.2.1 Federal Regulation

United States Environmental Protection Agency

Criteria Air Pollutants

At the federal level, the United States Environmental Protection Agency (USEPA) has been charged with implementing national air quality programs. The USEPA's air quality mandates are drawn primarily from the Federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments to the CAA were made by Congress in 1990.

The CAA requires the USEPA to establish National Ambient Air Quality Standards (NAAQS). The USEPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. Table 5.1-1 shows the NAAQS for these pollutants. The CAA also requires each state to prepare an air quality control plan, referred to as a state implementation plan (SIP). The CAA Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified regularly, and the interval can vary between one to a few years, to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. The SIP was most recently modified in 2022 and was modified twice in that year. The USEPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and to determine whether implementing the SIPs will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area.

The USEPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking. The USEPA's primary role at the state level is to oversee state air quality programs. The USEPA sets federal vehicle and stationary source emissions standards and provides research and guidance in air pollution programs.

Hazardous Air Pollutants

The USEPA has programs for identifying and regulating hazardous air pollutants (HAPs). Title III of the CAAA directed the USEPA to promulgate national emissions standards for HAPs (NESHAP). Major sources are defined as stationary sources with potential to emit more than 10 tons per year (tpy) of any HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources. The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), the USEPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum achievable control technology (MACT). For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the USEPA promulgated health-risk-based emissions standards when deemed necessary, to address risks remaining after implementation of the technology-based NESHAP standards.

Table 5.1-1: Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour 8 hours	0.09 ppm 0.07 ppm	--- 0.075 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when ROG and NO_X react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide (CO)	1 hour 8 hours	20 ppm 9.0 ppm	35 ppm 9 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
Nitrogen Dioxide (NO_2)	1 hour Annual Arithmetic Mean	0.18 ppm 0.030 ppm	0.100 ppm 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual Arithmetic Mean	0.25 ppm --- 0.04 ppm ---	75 ppb 0.50 ppm 0.14 ppm 0.03 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM_{10})	24 hours Annual Arithmetic Mean	50 µg/m³ 20 µg/m³	150 µg/m³ ---	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Fine Particulate Matter ($PM_{2.5}$)	24 hours Annual Arithmetic Mean	--- 12 µg/m³	35 µg/m³ 12 µg/m³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO_X, sulfur oxides, and organics.
Lead (Pb)	30 Day Average Calendar Quarter Rolling 3-Month Average	1.5 µg/m³ --- ---	--- 1.5 µg/m³ 0.15 µg/m³	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction (in severe cases).	*Present source:* lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal power plants, petroleum production and refining
Sulfates (SO_4)	24 hour	25 µg/m³	No National Standard	Decrease in ventilatory functions; aggravation of asthmatic symptoms; aggravation of cardio-pulmonary disease; vegetation damage; degradation of visibility; property damage.	Industrial processes.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See $PM_{2.5}$.

Note: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter.

The CAAA also required the USEPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions of, at a minimum, benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, Section 219 required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

5.1.2.2 State Regulations

California Air Resources Board

Criteria Air Pollutants

The California Air Resources Board (CARB), a department of the California Environmental Protection Agency, oversees air quality planning and control throughout California. CARB is responsible for coordination and oversight of state and local air pollution control programs in California and for implementation of the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, requires CARB to establish the California Ambient Air Quality Standards (CAAQS). CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. Applicable CAAQS are shown in Table 5.1-1.

The CCAA requires all local air districts in the state to endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts shall focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources.

Among CARB's other responsibilities are overseeing compliance by local air districts with California and federal laws, approving local air quality plans, submitting SIPs to the USEPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

The California Air Resources Board Handbook

CARB has developed an Air Quality and Land Use Handbook which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process (California Air Resources Board, 2005). According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land uses that can produce air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and

- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies must balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to help land use agencies determine when to further examine project sites for actual health risk associated with the location of new sensitive land uses.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances capable of causing short-term (acute) and long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). Air quality regulations also focus on TACs. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no safe level of exposure. This contrasts with the criteria for air pollutants, for which acceptable levels of exposure can be determined and for which ambient standards have been established. Instead, the USEPA and CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum achievable control technology or best available control technology for toxics and to limit emissions. These statutes and regulations, in conjunction with additional rules set forth by the districts, establish the regulatory framework for TACs.

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807 [Chapter 1047, Statutes of 1983]) and the Air Toxics Hot Spots Information and Assessment Act (Hot Spots Act) (AB 2588 [Chapter 1252, Statutes of 1987]). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted the USEPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate best available control technology to minimize emissions.

The Air Toxics Hot Spots Information and Assessment Act requires existing facilities emitting toxic substances above a specified level to prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

CARB published the Air Quality and Land Use Handbook: A Community Health Perspective (Handbook), which provides guidance concerning land use compatibility with TAC sources (CARB, 2005). Although it is not a law or adopted policy, the Handbook offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities, to help keep children and other sensitive populations out of harm's way. In addition, CARB has promulgated the following specific rules to limit TAC emissions:

- **CARB Rule 2485** (13 CCR, Chapter 10 Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **CARB Rule 2480** (13 CCR Chapter 10 Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools

- **CARB Rule 2477** (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

California Assembly Bill 1493– Pavley

In 2002, the California Legislature adopted AB 1493 requiring the adoption of regulations to develop fuel economy standards for the transportation sector. In September 2004, pursuant to AB 1493, the CARB approved regulations to reduce fuel use and emissions from new motor vehicles beginning with the 2009 model year (Pavley Regulations). CARB, EPA, and the U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) have coordinated efforts to develop fuel economy standards for model 2017-2025 vehicles, which are incorporated into the "Low Emission Vehicle" (LEV) Regulations.

California Code of Regulations (CCR) Title 13, Motor Vehicles, Section 2449(d)(3)

No vehicle or engines subject to this regulation may idle for more than 5 consecutive minutes. The idling limit does not apply to:

- Idling when queuing,
- Idling to verify that the vehicle is in safe operating condition,
- Idling for testing, servicing, repairing or diagnostic purposes,
- Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),
- Idling required to bring the machine system to operating temperature, and
- Idling necessary to ensure safe operation of the vehicle.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CALGreen) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. CALGreen is updated on a regular basis, with the most recently approved update consisting of the 2022 California Green Building Code Standards that became effective January 1, 2023.

The 2022 CALGreen standards that reduce air quality emissions and are applicable to the proposed Project include, but are not limited to, the following:

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided is contained within Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.

- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water used in landscaped areas. Nonresidential developments shall comply with the local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 SF or for excess consumption where any tenant within a new building or within an addition is projected to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 SF. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

The 2022 CALGreen Building Standards Code has been adopted by the Tustin City Code pursuant to Ordinance No. 1529.

5.1.2.3 Regional Regulations

South Coast Air Quality Management District

Criteria Air Pollutants

The South Coast Air Quality Management District (SCAQMD) attains and maintains air quality conditions in the Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SCAQMD includes preparation of plans for attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. SCAQMD also inspects stationary sources of air pollution and responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements programs and regulations required by the CAA, CAA Amendments, and CCAA. Air quality plans applicable to the proposed Project are discussed below.

Air Quality Management Plan

SCAQMD and the Southern California Association of Governments (SCAG) are responsible for preparing the air quality management plan (AQMP), which addresses federal and State CAA requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin.

The 2012 AQMP was adopted by the SCAQMD Governing Board on December 12, 2012. The purpose of the 2012 AQMP for the Basin is to set forth a comprehensive and integrated program that will lead the region into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the Basin's commitment towards meeting the federal 8-hour ozone standards. The AQMP would also serve to satisfy recent USEPA requirements for a new attainment demonstration of the revoked 1-hour ozone standard, as well as a vehicle miles travelled (VMT) emissions offset demonstration. The 2012 AQMP, as approved by CARB, serves as the official SIP submittal for the federal 2006 24-hour $PM_{2.5}$ standard. In addition, the AQMP updates specific new control measures and commitments for emissions reductions to implement the attainment strategy for the 8-hour ozone SIP. The 2012 AQMP set forth programs which require integrated planning efforts and the cooperation of all levels of government: local, regional, State, and federal.

In March 2017 AQMD finalized the 2016 AQMP, which continued to evaluate integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, State, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporated scientific and technological information and planning assumptions, including the 2016 RTP/SCS and updated emission inventory methodologies for various source categories.

The 2022 AQMP was adopted by the SCAQMD Governing Board on December 2, 2022. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NOx technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 federal 8-hour ozone standard. SCAQMD included a total of 49 control measures in the 2022 AQMP, including control measures focused on widespread deployment of zero emission and low NOx technologies through a combination of regulatory approaches and incentives.

The RTP/SCS also provides a combination of transportation and land use strategies that help the region achieve State GHG emissions reduction goals and Federal Clean Air Act requirements, preserve open space

areas, improve public health and roadway safety, support our vital goods movement industry, and use resources more efficiently. GHG emissions resulting from development-related mobile sources are the most potent source of emissions.

SCAQMD Rules and Regulations

All projects are subject to SCAQMD rules and regulations. Specific rules applicable to the proposed Project include the following:

Rule 203 – Permit to Operate. A person shall not operate or use any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants, without first obtaining a written permit to operate from the Executive Officer or except as provided in Rule 202. The equipment or agricultural permit unit shall not be operated contrary to the conditions specified in the permit to operate.

Rule 401 – Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

Rule 402 – Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Rule 403 – Fugitive Dust. SCAQMD Rule 403 governs emissions of fugitive dust during and after construction. Compliance with this rule is achieved through application of standard Best Management Practices (BMP), such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires project applicants to control fugitive dust using the best available control measures such that dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating an offsite nuisance. Applicable Rule 403 dust suppression (and PM_{10} generation) techniques to reduce impacts on nearby sensitive receptors may include, but are not limited to, the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. Locations where grading is to occur shall be thoroughly watered prior to earthmoving.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
- Suspend all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Provide bumper strips or similar best management practices where vehicles enter and exit the construction site onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Replant disturbed areas as soon as practical.

- Sweep onsite streets (and offsite streets if silt is carried to adjacent public thoroughfares) to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

Rule 481 – Spray Coating. This rule applies to all spray painting and spray coating operations and equipment and states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

- The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.
- Coatings are applied with high-volume low-pressure, electrostatic and/or airless spray equipment.
- An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

Rule 1108 - Volatile Organic Compounds. This rule governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the Basin. This rule also regulates the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the Project must comply with SCAQMD Rule 1108.

Rule 1113 – Architectural Coatings. No person shall apply or solicit the application of any architectural coating within the SCAQMD with VOC content in excess of the values specified in a table incorporated in the Rule.

Rule 1143 – Paint Thinners and Solvents. This rule governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

Rule 2305 – Warehouse Indirect Source Rule. On May 7, 2021, the SCAQMD Governing Board approved Rule 2305. The stated purpose of the Indirect Source Rule "is to reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with warehouses and the mobile sources attracted to warehouses in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter." The rule applies to owners and operators of new and existing warehouses located in the South Coast Air Basin "with greater than or equal to 100,000 square feet of indoor space in a single building that may be used for warehousing activities by one or more warehouse operators." The rule imposes a "Warehouse Points Compliance Obligation" (WPCO) on warehouse operators. Operators would be allowed to satisfy the WPCO by accumulating "Warehouse Actions and Investments to Reduce Emissions Points" (WAIRE Points) in a given 12-month period. WAIRE Points will be awarded by implementing measures to reduce emissions listed on the WAIRE Menu, or by implementing a custom WAIRE Plan approved by the SCAQMD.

5.1.2.4 Local Regulations

City of Tustin General Plan

The City of Tustin has not prepared a Climate Action Plan. The City's General Plan includes policies related to air quality in the Conservation, Open Space, and Recreation Element that include the following:

Conservation, Open Space, and Recreation Element

Goal 1: **Reduce air pollution through proper land use, transportation and energy use planning.**

Policy 1.1: Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.

Policy 1.2: Design safe and efficient vehicular access to commercial land uses from arterial streets to insure efficient vehicle ingress and egress.

Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.3: Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.

Goal 2: **Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.**

Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.6: Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.

Policy 2.7: Encourage employer rideshare and transit incentives programs by local businesses.

Policy 2.8: Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

Goal 3: **Reduce particulate emissions to the greatest extent feasible.**

Policy 3.1: Adopt incentives, regulations, and/or procedures to minimize particulate emissions from paved and unpaved roads, agricultural uses, parking lots, and building construction.

5.1.3 ENVIRONMENTAL SETTING

Climate and Meteorology

The Project area is located within the South Coast Air Basin (Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s°F. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Tustin Irvine Ranch Station. The monthly average maximum temperature recorded at this station ranged from 66.8°F in January to 85.2°F in August, with an annual average maximum of 75.4°F. The monthly average minimum

temperature recorded at this station ranged from 40.2°F in January to 59.1°F in August, with an annual average minimum of 49.4°F.

Most of the annual rainfall in the Basin occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. Average monthly rainfall at the Tustin Irvine Ranch Station varied from 0.01 inch in July to 2.67 inches in March, with an annual total of 12.86 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high-pressure system. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the air appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the Project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the Project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north, or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog. Smog is a general term that is naturally occurring fog that has become mixed with smoke or pollution. In this context it is better described as a form of air pollution produced by the photochemical reaction of sunlight with pollutants that have been released into the atmosphere, especially by automotive emissions.

Criteria Air Pollutants

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead. These pollutants are referred to as "criteria air pollutants" because they are the most prevalent air pollutants known to be injurious to human health. Extensive health-effects criteria documents regarding the effects of these pollutants on human health and welfare have been prepared over the years.[1] Standards have been established for each criteria pollutant to meet specific public health and welfare criteria set forth in the federal Clean Air Act (CAA). California has generally adopted more stringent ambient air quality standards for the criteria air pollutants (referred to as State Ambient Air Quality Standards, or State standards) and has adopted air quality standards for some

[1] Additional sources of information on the health effects of criteria pollutants can be found at CARB and USEPA's websites at http://www.arb.ca.gov/research/health/health.htm and http://www.epa.gov/air/airpollutants.html, respectively.

pollutants for which there is no corresponding national standard, such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Table 5.1-2 summarizes the sources and health effects of air pollutants discussed in this section.

Table 5.1-2: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust • Natural events, such as decomposition of organic matter	• Reduced tolerance for exercise • Impairment of mental function • Impairment of fetal development • Death at high levels of exposure • Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust • High temperature stationary combustion • Atmospheric reactions	• Aggravation of respiratory illness • Reduced visibility • Reduced plant growth • Formation of acid rain
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight	• Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Impairment of cardiopulmonary function • Plant leaf injury
Lead (Pb)	• Contaminated soil	• Impairment of blood functions and nerve construction • Behavioral and hearing problems in children
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	• Stationary combustion of solid fuels • Construction activities • Industrial processes • Atmospheric chemical reactions	• Reduced lung function • Aggravation of the effects of gaseous pollutants • Aggravation of respiratory and cardiorespiratory diseases • Increased cough and chest discomfort • Soiling • Reduced visibility
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels • Smelting of sulfur-bearing metal ores Industrial processes	• Aggravation of respiratory diseases (asthma, emphysema) • Reduced lung function • Irritation of eyes • Reduced visibility • Plant injury • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board (2015).

Ozone

Ozone (O_3), the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air; but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROGs) or volatile organic compounds (VOCs), and oxides of nitrogen (NOx). While both ROGs and VOCs refer to compounds of carbon, ROG is a term used by CARB and is based on a list of exempted carbon compounds determined by CARB. VOC is a term used by the USEPA and is based on its own exempt list. The time period required for ozone formation allows the reacting compounds to spread over a large area, producing regional pollution problems. Ozone concentrations are the cumulative result of regional development patterns rather than the result of a few significant emission sources.

Once ozone is formed, it remains in the atmosphere for one or two days. Ozone is then eliminated through reaction with chemicals on the leaves of plants, attachment to water droplets as they fall to earth ("rainout"), or absorption by water molecules in clouds that later fall to earth with rain ("washout").

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. In addition to causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide

CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Nitrogen Dioxide

NO_2 is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NOx, which are reported as equivalent NO_2. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Sulfur Dioxide

SO_2 is a colorless, extremely irritating gas or liquid that enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfur trioxide (SO_3). Collectively, these pollutants are referred to as sulfur oxides (SOx).

Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of SO_2 aggravate lung diseases, especially bronchitis. This compound also constricts the breathing passages, especially in people with asthma and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. Long-term SO_2 exposure has been associated with increased risk of mortality from respiratory or cardiovascular disease.

Particulate Matter

PM_{10} and $PM_{2.5}$ consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively (a micron is one-millionth of a meter). PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis and respiratory illnesses in children. Particulate matter can also damage materials and reduce visibility. One common source of $PM_{2.5}$ is diesel exhaust emissions.

PM_{10} consists of particulate matter emitted directly into the air (e.g., fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust) and particulate matter formed in the atmosphere by condensation and/or transformation of SO_2 and ROG. Traffic generates particulate matter emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM_{10} and $PM_{2.5}$ are also emitted by burning wood in residential wood stoves and fireplaces and open agricultural burning. $PM_{2.5}$ can also be formed through secondary processes such as airborne reactions with certain pollutant precursors, including ROGs, ammonia (NH_3), NOx, and SOx.

Lead

Lead is a metal found naturally in the environment and present in some manufactured products. There are a variety of activities that can contribute to lead emissions, which are grouped into two general categories,

stationary and mobile sources. On-road mobile sources include light-duty automobiles; light-, medium-, and heavy-duty trucks; and motorcycles.

Emissions of lead have dropped substantially over the past 40 years. The reduction before 1990 is largely due to the phase-out of lead as an anti-knock agent in gasoline for on-road automobiles. Substantial emission reductions have also been achieved due to enhanced controls in the metals processing industry. In the Basin, atmospheric lead is generated almost entirely by the combustion of leaded gasoline and contributes less than one percent of the material collected as total suspended particulates.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and the CARB. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards (AAQS), but are regulated by the USEPA, the CARB, and the SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter (DPM) is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as "on-road" sources such as trucks and buses traveling on freeways and local roadways.

Although not specifically monitored, recent studies indicate that exposure to DPM may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined. The technology for reducing DPM emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide DPM concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB's Diesel Risk Reduction Plan, meaning that the statewide health risk from DPM is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. The CARB 2000 Diesel Risk Reduction Plan is still the most recent version and has not been updated.

CO Hotspots

An adverse CO concentration, known as a "hot spot" is an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

Odorous Emissions

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Offensive odors are unpleasant and can lead to public distress generating citizen complaints to local governments. Although unpleasant, offensive odors rarely cause physical harm. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, wind speed, direction, and the sensitivity of receptors.

Existing Conditions

The State emitted approximately 381.3 MMT CO_2e emissions in 2021, 12.1 MMT CO_2e higher than 2020 levels and 49.7 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e (California Air Resources Basin, 2023). CARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at approximately 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high Global Warming Potentials (GWP) such as activities involving refrigerants at 6 percent, and waste at 2 percent. GHG is discussed further in Section 5.3.

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the Project site is located at 1630 Pampas Lane in Anaheim, California.

Pollutant monitoring results for the years 2020 to 2022 at the Anaheim ambient air quality monitoring station, shown in Table 5.1-3, indicate that air quality in the area has generally been moderate. As indicated in the monitoring results, the federal PM_{10} standard was not exceeded during the 3-year period. The State PM_{10} standard was exceeded 5 times in 2020, once in 2021, and once in 2022. Similarly, the federal $PM_{2.5}$ standard had 12 exceedances in 2020, 10 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standards were exceeded 6 times in 2021, no times in 2021, and once in 2022. The State 8-hour ozone standards were exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standards were exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO_2 standards were not exceeded in this area during the 3-year period. SO_2 data was not available from 2020 to 2022 at air quality monitoring stations in Orange County.

Table 5.1-3: Air Quality Monitoring Summary 2020-2022

Pollutant	Standard	2020	2021	2022
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		2.3	2.1	2.4
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.7	1.5	1.4
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O3)				
Maximum 1-hour concentration (ppm)		0.142	0.089	0.102
Number of days exceeded:	State: > 0.09 ppm	6	0	1

Pollutant	Standard	2020	2021	2022
Maximum 8-hour concentration (ppm)		0.098	0.068	0.077
Number of days exceeded:	State: > 0.07 ppm	16	0	1
	Federal: > 0.07 ppm	15	0	1
Coarse Particulates (PM10)				
Maximum 24-hour concentration (µg/m3)		74.8	63.6	67.0
Number of days exceeded:	State: > 50 µg/m3	5	1	1
	Federal: > 150 µg/m3	0	0	0
Annual arithmetic average concentration (µg/m3)		30.8	23.4	20.9
Exceeded for the year:	State: > 20 µg/m3	Yes	Yes	Yes
	Federal: > 50 µg/m3	No	No	No
Fine Particulates (PM2.5)				
Maximum 24-hour concentration (µg/m3)		64.8	54.4	33.1
Number of days exceeded:	Federal: > 35 µg/m3	12	10	0
Annual arithmetic average concentration (µg/m3)		12.4	11.6	9.9
Exceeded for the year:	State: > 12 µg/m3	Yes	No	No
	Federal[a]: > 12 µg/m3	No	No	No
Nitrogen Dioxide (NO2)				
Maximum 1-hour concentration (ppm)		0.071	0.067	0.053
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.013	0.012	0.012
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO2)				
Maximum 1-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.25 ppm	ND	ND	ND
Maximum 24-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.04 ppm	ND	ND	ND
	Federal: > 0.14 ppm	ND	ND	ND
Annual arithmetic average concentration (ppm)		ND	ND	ND
Exceeded for the year:	Federal: > 0.030 ppm	ND	ND	ND

Sources: CARB (2023) and USEPA (2023).

[a] On March 7, 2024, the federal annual $PM_{2.5}$ standard was revised from 12.0 µg/m^3 to 9.0 µg/m^3. However, since the data presented in Table 3.C-1 is through 2022, it uses the 12.0 µg/m^3 standard that was in effect through 2022.

µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
ND = No data. There were insufficient (or no) data to determine the value.
Ppm = parts per million
USEPA = United States Environmental Protection Agency

The CARB is required to designate areas of the state as "*attainment*", "*nonattainment*", or "*unclassified*" for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data do not support

either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as either "*does not meet the primary standards*", or "*cannot be classified*", or "*better than national standards*". For SO_2, areas are designated as "*does not meet the primary standards*", "*does not meet the secondary standards*", "*cannot be classified*", "*or better than national standards*".

Table 5.1-4 provides a summary of the attainment status for the Basin with respect to NAAQS and CAAQS.

Table 5.1-4: Attainment Status of Criteria Pollutants in the South Coast Air Basin (SCAB)

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	Extreme Nonattainment
O_3 – 8-hour standard	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	N/A	Attainment/Unclassified
Pb[2]	Attainment	Attainment[1]

Source: Air Quality Impact Analysis, 2024 (Appendix B).

Sensitive Land Uses

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive to poor air quality than the general public, because the population groups associated with these uses have increased susceptibility to respiratory distress. In addition, residential uses are considered more sensitive to air quality conditions than commercial and industrial uses, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. The closest sensitive receptors to the Project site include residential uses, located approximately 70 feet south of the Project's site boundary (see Figure 2-3, Aerial View).

5.1.4 THRESHOLDS OF SIGNIFICANCE

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Regional Significance Thresholds

The SCAQMD's most recent regional significance thresholds from March 2023 for regulated pollutants are listed in Table 5.1-5. The SCAQMD's CEQA air quality methodology provides that any projects that result in daily emissions that exceed any of the thresholds in Table 5.1-5 would be considered to have both an individually (Project-level) and cumulatively significant air quality impact.

Table 5.1-5: SCAQMD Regional Air Quality Thresholds

Pollutant	Construction	Operations
Nox	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

Source: Air Quality Impact Analysis, 2024 (Appendix B).

Local Significance Thresholds

The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008, recommending that all air quality analyses include an assessment of air quality impacts to nearby sensitive receptors. This guidance was used to analyze potential localized air quality impacts associated with construction of the Project. Localized significance thresholds (LST) are developed based on the size or total area of the emission source, the ambient air quality in the source receptor area, and the distance to the project. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality.

LSTs are developed based on the ambient concentrations of that pollutant for each of the 38 source receptor areas (SRAs) in the Basin. The Project site is located within Central Orange County (SRA 17). For the Project, the appropriate SRA for the LST is the nearby Central Orange County (SRA 17). SCAQMD provides LST screening tables for 25-, 50-, 100-, 200-, and 500-meter source-receptor distances. As identified above, the closest sensitive receptors to the Project site include residential uses, located approximately 70 feet south of the Project's site boundary. In cases where sensitive receptors may be closer than 82 feet (25 meters), any distance within the 82-foot (25-meter) buffer zone can be used. As such, the minimum distance of 25 meters was conservatively used for the "worst case scenario". Based on the anticipated construction equipment, it is assumed that the maximum daily disturbed acreage during construction would be 3.5 acres. The 5-acre thresholds were used for Project operation. Table 5.1-6 lists the conservative emissions thresholds that apply during potential future Project construction and operation.

Table 5.1-6: SCAQMD Localized Significance Thresholds

Emissions Source	Pollutant Emissions Threshold (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Construction	149.0	984.0	9.5	5.5
Operations	183.0	1,253.0	3.0	2.0

Source: South Coast Air Quality Management District (2008).
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

5.1.5 METHODOLOGY

This analysis focuses on the nature and magnitude of the change in the air quality environment that could potentially occur through future buildout of the Project, based on the maximum development assumptions that are outlined in Section 3.0*, Project Description*. Therefore, the following analysis provides a conservative assumption of emissions that represent "worst case scenario".

Air pollutant emissions associated with the Project would result from construction equipment usage and from construction-related traffic. Additionally, emissions would be generated from operations of the future residences and from traffic volumes generated by this new use. The net increase in emissions generated by these activities and other secondary sources have been quantitatively estimated and compared to the applicable thresholds of significance recommended by SCAQMD.

AQMP Consistency

SCAQMD's CEQA Handbook suggests an evaluation of the following two criteria to determine whether a project involving a legislative land use action (such as the proposed General Plan land use and zoning designation changes) would be consistent or in conflict with the AQMP:

1. The project would not generate population and employment growth that would be inconsistent with SCAG's growth forecasts.
2. The project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to the SCAG's growth forecast and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities and counties located within the SCAG region, and, in part, on SCAG's three Land Development Categories. Therefore, if the level of housing or employment related to the Project are consistent with the applicable assumptions used in the development of the AQMP, the Project would not jeopardize attainment of the air quality levels identified in the AQMP.

Consistency Criterion No. 2 refers to the California Ambient Air Quality Standards (CAAQS). An impact would occur if the long-term emissions associated with the Project would exceed SCAQMD's regional significance thresholds for operation-phase emissions.

Construction Emissions

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include demolition, site preparation, earthmoving, and general construction. The

emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips.

The California Emissions Estimator Model version 2022.1 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. Information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 413 units and remaining commercial buildout capacity associated with the proposed project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities. The proposed project would demolish the existing surface parking area but would not demolish any existing buildings. This analysis also assumes that the proposed project would comply with SCAQMD Rule 403 measures. In addition, this analysis assumes the use of Tier 2 construction equipment, which was also included in CalEEMod. All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used.

Operational Emissions

The air quality analysis includes estimating emissions associated with long-term operation of the proposed project. Consistent with the SCAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project.

This analysis evaluates the buildout of 413 units and remaining commercial buildout capacity within the project site and compares the potential impacts to impacts associated with the existing commercial uses as determined based on two CalEEMod runs.

As identified in the Project Description, the existing uses that were modeled consist of the Enderle Center that is currently developed with 87,136 sq ft of commercial business uses, including 28,750 sq ft of restaurant use, 39,960 sq ft of retail and service use, and 18,426 sq ft of office use. The analysis was conducted using land use codes *High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, and *Parking Lot*. Trip generation rates used in CalEEMod for the existing uses were based on the trip generation rate of 7,058 ADT.

The analysis of the future buildout of the project site included the existing development, the buildout of 413 units, and the addition of the total remaining nonresidential use including a total of 67,837 sq ft of restaurant use, 94,288 sq ft of retail and service use, and 43,477 sq ft of office use. The analysis was conducted using land use codes *Apartments Mid Rise*, *High Turnover (Sit Down Restaurant), Strip Mall,* and *General Office Building* assuming a total trip generation of 18,528 ADT. This analysis assumes that the proposed project would not include any woodburning hearths or wood stoves. Where project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate project emissions.

5.1.6 ENVIRONMENTAL IMPACTS

IMPACT AQ-1: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN.

No Impact.

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

Consistency with the 2022 AQMP would be achieved if the project is consistent with the goals, objectives, and assumptions in this plan to achieve the federal and State air quality standards. Per SCAQMD's *CEQA Air Quality Handbook*, there are two main indicators of a project's consistency with the AQMP:

Indicator 1: Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or emission reductions in the AQMP.

> ***Indicator 1:*** As demonstrated below, the regional emissions generated by construction and operation of the proposed project would be less than the SCAQMD emissions thresholds. As such, the proposed project would not be inconsistent with Indicator 1.

Indicator 2: Whether the project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

> ***Indicator 2:*** The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities.

The proposed Project includes a GPA to amend the City's existing General Plan to allow for a higher density of residential development in commercial land use designations than are currently allowed and to create a Housing Overlay (HO) zone. The proposed Project would not directly result in physical development, but upon approval of the Housing Overlay, the Project site could accommodate 413 units as a result of the changes in regulations. As such, this analysis evaluates whether the Project would exceed the 2022 AQMP's assumptions.

With respect to determining the proposed Project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2020–2045 RTP/SCS, the City's population, households, and employment are forecast to increase by approximately 10,500 residents, 4,100 households, and 21,600 jobs, respectively, between 2016 and 2045.

As identified in Section 3.0, *Project Description*, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, Enderle Center (the Project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. The proposed project would accommodate up to 413 housing units to help the City meet its RHNA allocation.

As described in Section 5.6, *Population and Housing*, the development of 413 housing units would result in approximately 1,189 additional residents based on the estimated 2.88 persons per household in Tustin. Future development implemented in accordance with the proposed Housing Overlay Zone would accommodate planned regional housing growth included in the SCAG RHNA and would be required to

adhere to the General Plan. Therefore, since the purpose of the proposed Project is to accommodate planned regional housing growth included in the SCAG RHNA, the proposed Project would not exceed the growth assumptions in the SCAG's RTP/SCS or the AQMP.

In addition, since the proposed Project would not include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities, the proposed Project is not a significant project as defined by the SCAQMD *CEQA Air Quality Handbook*. Therefore, it is unlikely that the proposed Project would interfere with SCAQMD's goals for improving air quality in the region. The proposed Project would not conflict with the 2022 AQMP and, as such, would not jeopardize attainment of the CAAQS and NAAQS in the area under the jurisdiction of the SCAQMD. The proposed Project is therefore considered consistent with Indicator 2.

Summary: Based on the discussion above, the proposed Project would not conflict or obstruct implementation of applicable air quality plans under Indicator 1 because the proposed Project would result in pollutant emissions below the SCAQMD's thresholds. The Project would also be consistent with the regional AQMP (Indicator 2), since the purpose of the Project is to accommodate planned regional housing growth included in the SCAG RHNA. As such, based on the consistency analysis presented above, the proposed Project would be consistent with the regional AQMP.

IMPACT AQ-2: THE PROJECT WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE PROJECT REGION IS NON-ATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARD.

Less than Significant Impact.

The Basin is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The following analysis assesses the Project-level construction- and operation-related air quality impacts.

Construction

It is important to note that the Project would not, in and of itself entitle, propose, or otherwise require the construction of new development. The proposed project would create a Housing Overlay Zone that would accommodate 413 units.

Construction activities associated with the construction of additional housing units and remaining commercial buildout capacity that could occur with implementation of the Project would be through the horizon year 2029, which would cause short-term emissions of criteria air pollutants. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be

analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include demolition of existing parking lots and landscaping, site preparation, grading, building construction, architectural coating, and paving activities. Construction-related effects on air quality are typically greatest during the grading phase due to the disturbance of soil. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at construction sites. Unless properly controlled, vehicles leaving construction sites would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403 (Fugitive Dust), which would require the contractor to implement measures that would reduce the amount of particulate matter generated during the construction period.

In addition to dust-related PM10 emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO2, NOX, VOCs and some soot particulate (PM2.5 and PM10) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for development envisioned under the Project using CalEEMod. As described in the Methodology section above, information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 413 units and remaining commercial buildout capacity associated with the proposed Project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a Project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod. Table 5.1-7 lists the tentative schedule, and Table 5.1-8 lists the potential construction equipment to be used during Project construction under each phase of construction. Construction-related emissions are presented in Table 5.1-9.

Table 5.1-7: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	10/7/2024	11/4/2024	5	20
2	Site Preparation	11/5/2024	11/19/2024	5	10
3	Grading	11/20/2024	1/1/2025	5	30
4	Building Construction	1/2/2025	2/26/2026	5	300
5	Paving	2/27/2026	3/27/2026	5	20
6	Architectural Coating	12/8/2025	4/25/2026	5	100

Source: Compiled by LSA assuming construction would start October 2024 with a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities. This analysis also assumes demolition of the surface parking lot would occur over a 30-day period (March 2024).

Table 5.1-8: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	33	0.73
	Excavators	3	8	36	0.38
	Rubber Tired Dozers	2	8	367	0.4
Site Preparation	Rubber Tired Dozers	3	8	367	0.4
	Tractors/Loaders/Backhoes	4	8	84	0.37
Grading	Excavators	2	8	36	0.38
	Graders	1	8	148	0.41
	Rubber Tired Dozers	1	8	367	0.4
	Scrapers	2	8	423	0.48
	Tractors/Loaders/Backhoes	2	8	84	0.37
Building Construction	Cranes	1	7	367	0.29
	Forklifts	3	8	82	0.2
	Generator Sets	1	8	14	0.74
	Tractors/Loaders/Backhoes	3	7	84	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	81	0.42
	Paving Equipment	2	8	89	0.36
	Rollers	2	8	36	0.38
Architectural Coating	Air Compressors	1	6	37	0.48

Source: Compiled by LSA using CalEEMod defaults (March 2024).
CalEEMod = California Emissions Estimator Model

Table 5.1-9: Project Construction Emissions

Year	Emissions (lbs/day)					
	VOCs	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
2024	1.4	48.9	36.4	0.1	11.2	5.0
2025	38.0	48.9	36.3	0.1	6.6	2.7
2026	37.9	23.5	34.8	<0.1	6.6	2.1
Maximum Daily Emissions	**37.9**	**48.9**	**36.4**	**0.1**	**11.2**	**5.0**
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Air Quality Impact Analysis, March 2024
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in Table 5.1-8, construction emissions associated with future development, as envisioned under the Project would not exceed the SCAQMD thresholds for VOCs, NOX, CO, sulfur oxides (SOX), PM2.5, or PM10 emissions. Future development projects would be required to comply with SCAQMD Rule 403: Fugitive Dust, which would further reduce construction-related emissions. Therefore, future construction of development projects consistent with the Project would not result in emissions that would result in significant impact related

to net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard.

Operation

Operational activities associated with the additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the proposed Project would result in long-term air pollutant emissions associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment). Before development can take place, a project would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

PM10 emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM10 occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. The existing uses generate approximately 7,058 ADT and the proposed Project would generate approximately 18,528 ADT, as noted in Section 5.9, *Transportation*.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Major sources of energy demand for the Project could include building mechanical systems, such as heating and air conditioning, though the Project would not include the use of natural gas. The residential units would be constructed in compliance with the version of the Title 24 energy standards and the CALGreen Code in effect at the time building permit applications are submitted.

Typically, area source emissions consist of direct sources of air emissions located at the Project site, including architectural coatings, consumer products, and the use of landscape maintenance equipment.

Long-term operation emissions associated with development consistent with the Project were calculated using CalEEMod. Model results are shown in Appendix B of this document.

The results shown in Table 5.1-10 indicate that the net new emissions associated with the future development of the Project would not exceed the significance criteria for VOCs, NOX, CO, SOX, PM10, or PM2.5 emissions; thus, the Project would not have a significant impact on regional air quality.

Table 5.1-10: Project Operational Emissions

Emission Type	Emissions (lbs/day)					
	VOCs	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Existing Uses						
Existing Uses Mobile Sources	23.7	19.0	192.5	0.5	42.0	10.9
Existing Uses Area Sources	2.8	<0.1	3.8	<0.1	<0.1	<0.1
Existing Uses Energy Sources	0.1	1.1	0.9	<0.1	0.1	0.1
Total Existing Uses Emissions	**26.5**	**20.0**	**197.2**	**0.5**	**42.1**	**11.0**
Full Buildout of the Project site						
Project Buildout Mobile Sources	62.4	50.4	511.7	1.2	112.1	29.0
Project Buildout Area Sources	18.0	6.2	34.9	<0.1	0.5	0.5

Project Buildout Energy Sources	0.2	3.7	2.6	<0.1	0.3	0.3
Total Project Buildout Emissions	**80.6**	**60.2**	**549.2**	**1.3**	**112.9**	**29.8**
Net New Emissions (Project Buildout – Existing Uses)	**54.1**	**40.2**	**352.0**	**0.8**	**70.8**	**18.8**
SCAQMD Thresholds	**55.0**	**55.0**	**550.0**	**150.0**	**150.0**	**55.0**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Air Quality Impact Analysis, (March 2024)
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

IMPACT AQ-3: THE PROJECT WOULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

Significant and Unavoidable.

CO Hotspots

Vehicular trips associated with the Project would contribute to congestion at intersections and along roadway segments in the Project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the Project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate Project vicinity are not available. Ambient CO levels monitored at the Anaheim monitoring station, the closest station to the City of Tustin, showed a highest recorded 1-hour concentration of 2.4 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 1.7 ppm (the State standard is 9 ppm) during the past 3 years (Table 5.1-3). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Full buildout of development consistent with the Project would generate 11,470 net new ADT in the immediate vicinity of the opportunity sites and would result in 757 net new AM peak-hour trips and in 1,041 net new PM peak-hour trips. The Project would not result in any operational deficiencies to the surrounding roadway system. The evaluation of the study area intersections shows that the addition of traffic associated with new residential development allowed under the Project's Housing Overlay Zone is not expected to create significant level of service changes under Project build out. Therefore, Project traffic would not create any significant adverse impacts to nearby intersections.

Therefore, given the extremely low level of CO concentrations in the City, and lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly or result in the CO concentrations exceeding the State or federal CO standards. Therefore, the Project would result in a less than significant impact.

Health Risk Assessment

The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors such as residential land uses in the immediate vicinity of the Project site as a result of construction and operational activities. The thresholds are based on standards established by the SCAQMD in its Localized Significance Thresholds (LST) Methodology and are measured against construction and operational emissions that occur on a specific Project site (Southern California Air Quality Managment District, 2021). These emissions are primarily generated from heavy-duty construction equipment and demolition, grading, and trenching activities. Construction and operational activities associated with the construction of additional housing units and remaining commercial buildout capacity that could occur with implementation of the Project would have the potential to cause or contribute to significant localized air quality impacts to nearby residential land uses.

Construction and operation emissions associated with development consistent with the Project were compared to the LST screening tables in SRA 17, based on a 25-meter source-receptor distance.

By design, the localized impacts analysis only includes on-site emission sources; however, the CalEEMod outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions (detailed in Tables 5.1-11 and 5.1-12 below) assume all area and energy source emissions would occur on site, and 5 percent of the Project-related new mobile sources, which is an estimate of the amount of Project-related on-site vehicle travel, would occur on site. Given that the majority of vehicle travel would occur off site and considering the total overall VMT and trip length included in CalEEMod, assuming that 5 percent of the Project's VMT would occur on site is conservative.

The results of the LST analysis, summarized in Tables 5.1-11 and 5.1-12, indicate that the Project would result in an exceedance of the SCAQMD LSTs for PM_{10} during Project construction and operation.

Table 5.1-11: Project Localized Construction Emissions (lbs/day)

Source	NOx	CO	PM10	PM2.5
On-Site Project Construction Emissions	48.8	35.3	8.8	4.9
Localized Significance Threshold	149.0	984.0	9.5	5.5
Exceeds Threshold?	**No**	**No**	**No**	**No**

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

Table 5.1-12: Project Localized Operational Emissions (lbs/day)

Source	NOx	CO	PM10	PM2.5
On-Site Project Buildout Net New Emissions	10.4	48.8	4.2	1.6
Localized Significance Threshold	183.0	1,253.0	3.0	2.0
Exceeds Threshold?	**No**	**No**	**Yes**	**No**

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

The results of the LST analysis, summarized in Table 5.1-11, indicate that the Project would not result in an exceedance of the SCAQMD LSTs during Project construction. However, net new emissions associated with

the future development of the proposed Project would exceed the SCAQMD LSTs for PM_{10} during operational activities. As shown in Table 5.1-12 above, the majority of the PM_{10} emissions are associated with mobile sources from project-related vehicle trips. Emissions of motor vehicles are controlled by State and federal standards, and the project has no control over these standards. Furthermore, this analysis considers the most conservative scenario for future development allowed under the proposed Project, as details regarding future projects are unknown, and it is not known whether development would occur. Although future development details are unknown, implementation of Mitigation Measure AQ-1 would require a project-specific assessment of potential localized impacts for future projects and if future projects exceed the applicable LST thresholds, a dispersion modeling analysis would be necessary to calculate health risk from project implementation. While Mitigation Measure AQ-1 would serve to reduce localized emissions associated with buildout of the project, localized emission impacts would remain significant and unavoidable.

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. A dispersion modeling analysis would be necessary to calculate health risk from project implementation. However, since it is not possible to translate the amount of an unknown future specific project's emissions to a particular concentration, it is not possible to calculate the risk factor for a particular health effect at the time of this analysis.

Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Particulate matter can also lead to a variety of health effects in people. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Regional emissions of criteria pollutants contribute to these known health effects. The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals and that they are not exposed to elevated concentrations of criteria pollutants in the Basin. To achieve the health-based standards established by the USEPA, the SCAQMD prepared an AQMP that details regional programs to attain ambient air quality standards.

The analysis for the Project identifies that construction and operational emissions associated with development envisioned as part of the Project would be less than significant under the SCAQMD's thresholds for VOCs, NOX, CO, SOX, PM2.5, or PM10 emissions. However, it should be noted that the SCAQMD's numeric regional mass daily thresholds does not necessarily correspond to a determination for health risk impacts to sensitive receptors. This is because the mass daily thresholds are in pounds per day emitted into the air, whereas health effects are determined based on the concentration of emissions in the air at a particular receptor (e.g., ppm by volume of air, or $\mu g/m^3$ of air). State and federal ambient air quality standards were developed to protect the most susceptible population groups from adverse health effects and were established in terms of parts per million or micrograms per cubic meter for the applicable emissions.

However, the SCAQMD acknowledges that they have only been able to correlate potential health outcomes for very large emissions sources; specifically, 6,620 pounds per day (lbs/day) of NO_X, and 89,180 lbs/day of VOCs were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to ozone. As identified in 5.1-10 above, construction of the proposed Project would generate a maximum of 48.9 lbs/day of NO_X and 29.7 lbs/day of VOCs and as shown in 5.1-11, operation of the proposed Project would generate a maximum of 22.4 lbs/day of NO_X and 39.7 lbs/day of VOCs. Therefore, it is not expected that any future development associated with the proposed Project would generate 6,620 lbs/day of NO_X or 89,180 lbs/day of VOC emissions.

Therefore, emissions associated with the Project are not sufficiently high enough to correlate health effects on a Basin-wide level.

Current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences. For this reason, this discussion explains why it is not feasible to provide such an analysis. However, once a specific project is proposed, it would still be required to conduct

a site-specific localized impact analysis that evaluates potential project health impacts at a project level relative to immediately adjacent land uses.

In addition, the Project would be required to comply with SCAQMD standard conditions, including Rule 403 (Fugitive Dust) to control fugitive dust and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Furthermore, any necessary mitigation would be imposed at the project level once such future projects are proposed. However, the Project is conservatively assumed to result in a significant and unavoidable health risk impact.

Asbestos

Naturally occurring asbestos (NOA) refers to the asbestos mineral as a natural component of soils or rocks, as opposed to asbestos in commercial products or other processing operations. Ultramafic rocks may contain asbestos or asbestos-like materials. Naturally occurring asbestos can be released from rocks or soils by routine human activities, such as construction, mining, agriculture, or natural weathering processes. If NOA is disturbed and fibers are released into the air it may become a health risk from inhalation. According to the California Geological Survey, no such rock has been identified in the Project vicinity (LSA, 2024). When demolition is proposed to accommodate construction, the demolition of existing buildings could expose asbestos used in building materials. The construction of development projects envisioned under the Project would only include the demolition of the existing surface parking; therefore, existing buildings on the Project site would not be demolished as part of the Project. Therefore, the potential risk for naturally occurring asbestos during potential future project construction is small and would be less than significant.

IMPACT AQ-4: THE PROJECT WOULD NOT RESULT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE.

Less than Significant Impact.

The proposed Project would not emit other emissions, such as those generating objectionable odors, that would affect a substantial number of people. The threshold for odor is identified by SCAQMD Rule 402, Nuisance, which states:

> *A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.*

The type of facilities that are considered to result in other emissions, such as objectionable odors, include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities.

During construction of future development allowed under the Project, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The Project would allow for the development of future residential and commercial uses and would not include any activities or operations that would generate objectionable odors and once operational. Therefore, the proposed Project would not result in other emissions (such as those leading to odors) affecting a substantial number of people.

5.1.7 CUMULATIVE IMPACTS

This section presents information regarding potential cumulative impacts associated with the proposed Project. As defined in the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area. Table 5-1 in Section 5.0, *Environmental Impact Analysis*, provides a list of cumulative projects; however, because of the lack of available emissions data for the cumulative projects, cumulative emissions were not evaluated quantitatively. Table 5-1 lists the cumulative projects and provides a brief description and the distances from the Project site and Figure 5-1 includes a map of the various cumulative projects considered. The list includes two projects within the City of Santa Ana, and six projects within the City of Tustin.

The SCAQMD 2022 AQMP evaluates regional conditions within the Basin and sets regional emission significance thresholds for both construction and operation of development projects that apply to project-specific impacts and cumulatively-considerable impacts. Therefore, per SCAQMD's methodology, if an individual project would result in air emissions of criteria pollutants that exceeds the SCAQMD's thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants.

As described in Impact AQ-2 above, emissions from construction and operation would not exceed SCAAQMD's thresholds for any criteria pollutant at the regional or local level after implementation of existing regulations. Therefore, operational sources emissions would not be cumulatively considerable and would be less than significant.

As discussed in Impact AQ-3 the Project would not result in an exceedance of the SCAQMD LSTs during project construction. However, net new emissions associated with the future development of the proposed Project would exceed the SCAQMD LSTs for PM_{10} during operational activities. While Mitigation Measure AIR-1 would serve to reduce localized emissions associated with buildout of the project, localized emission impacts would remain significant and unavoidable. Therefore, impacts on human health risks would be cumulatively considerable and would be significant and unavoidable.

As discussed in Impact AQ-4, the Project would not expose surrounding uses to objectionable odors. Thus, there is no potential for odors from the Project to combine with odors from surrounding development Projects and expose nearby sensitive receptors to offensive odors. Therefore, the Project would not result in significant cumulative impacts related to odors.

5.1.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES.

Existing Regulations

State

- California Green Building Standards Code (Code of Regulations, Title 24 Part 6)

Regional

- SCAQMD Rule 402: Nuisance Odors
- SCAQMD Rule 403: Fugitive Dust
- Rule 481 – Spray Coating.
- Rule 1108 - Volatile Organic Compounds.
- SCAQMD Rule 1113: Architectural Coatings

- Rule 1143 – Paint Thinners and Solvents.

Plans, Programs, or Policies

These actions will be included in the Project's mitigation monitoring and reporting program (MMRP):

PPP AQ-1: Rule 403. The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, which includes the following:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project are watered, with complete coverage of disturbed areas, at least 3 times daily during dry weather; preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

PPP AQ-2: Rule 1113. The Project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used.

PPP AQ-4: Rule 402. The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 402. The Project shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

5.1.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

The Project would result in no impact related to Impact AQ-1 and less than significant impacts to Impacts AQ-2 and AQ-4. The Project would result in a potentially significant impact to AQ-3.

5.1.10 MITIGATION MEASURES

Mitigation Measure AIR-1. Prior to building permit approval by the City of Tustin (City) for future development projects, project applicants shall prepare and submit a technical assessment evaluating potential project-related air quality impacts, including a localized impacts analysis, to the City for review and approval. The analysis shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related emissions exceed applicable SCAQMD thresholds of significance, the City shall require that applicants for new development projects incorporate mitigation measures to reduce emissions. The identified measures shall be included as part of the conditions of approval. Additionally, if project-related localized emissions exceed the SCAQMD's thresholds, a dispersion modeling analysis shall be conducted to calculate potential health risk from project implementation, and all necessary mitigation measures shall be implemented.

5.1.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Upon implementation of existing regulatory requirements, the Project would result in no impact related to Impact AQ-1 and less than significant impacts related to Impacts AQ-2 and AQ-4. Impact AQ-3 would be significant and unavoidable even with implementation of mitigation measures.

5.1.12 REFERENCES

California Air Resources Basin. (2023). *California Greenhouse Gas Emissions for 2000 to 2021, Trends of Emissions and OtherIndicators Report.* Retrieved from https://ww2.arb.ca.gov/sites/default/files/2023-12/2000_2021_ghg_inventory_trends.pdf

California Air Resources Board. (2005, April). *Air Quality and Land Use Handbook: A Community Health Perspective*. Retrieved from https://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf

LSA. (2024). *The Market Place Project Air Quality, Energy, and Greenhouse Gas Report.*

Southern California Air Quality Managment District. (2021). *Localized Significance Thresholds*. Retrieved from http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds

Southern California Association of Governments. (2024, April). *Connect SoCal 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy*. Retrieved from https://scag.ca.gov/connect-socal

5.2 Energy

5.2.1 INTRODUCTION

This section of the Draft EIR assesses the significance of the use of energy, including electricity, natural gas and gasoline, and diesel fuels, that would result from implementation of the Project. It discusses existing energy use patterns and examines whether the Project (including development and operation) would result in the consumption of large amounts of fuel or energy or use such resources in a wasteful manner.

Refer to Section 5.3, *Greenhouse Gas Emissions*, for a discussion of the relationship between energy consumption and greenhouse gas (GHG) emissions, and Section 5.11, *Utilities and Service Systems*, for a discussion of water consumption. This section includes data from the following City documents and report from LSA in Appendix B:

- *City of Tustin General Plan (including 2021-2029 Housing Element). Adopted November 2018 (updated October 2022).*
- *Tustin City Code*
- *Enderle Center Project Air Quality, Energy, and Greenhouse Gas Report*, LSA, March 2024, Appendix B.

5.2.2 REGULATORY SETTING

5.2.2.1 Federal Regulations

Energy Independence and Security Act, Corporate Average Fuel Efficiency Standards

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law, requiring an increased Corporate Average Fuel Economy (CAFE) standard of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by the 2020 model year.

In addition to setting increased CAFE standards for motor vehicles, the Energy Independence and Security Act includes the following additional provisions:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

Additional provisions of the Act address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Corporate Average Fuel Economy (CAFE) Standards

On March 31, 2022, the National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between the model years 2030 to 2050.

5.2.2.2 State Regulations

Assembly Bill 1575, Warren-Alquist Act

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting

In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2023 Integrated Energy Policy Report* (California Energy Commission, 2023). The *Integrated Energy Policy Report* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewable Portfolio Standard

SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all the State's electricity come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019 (California Public Utilities Commission, 2019).

Title 24, California Building Code

Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, with the most recent update consisting of the 2022 CBC that became effective January 1, 2023. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

California Green Building Standards Code (CALGreen Code)

In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2022 CALGreen Code standards that became effective January 1, 2023. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan

On September 18, 2008, the CPUC adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.

50 percent of new major renovations of State buildings will be ZNE by 2025.

5.2.2.3 Local and Regional Regulations

City of Tustin General Plan

The City of Tustin addresses energy in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan. The Conservation, Open Space, and Recreation Element contains policies that work to reduce energy consumption. The following policies are applicable to the Project.

Goal 4: **Reduce emissions through reduced energy consumption.**

Policy 4.1: Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

Policy 4.2: Promote local recycling of wastes and the use of recycled materials.

Goal 11: **Conserve energy resources through use of available energy technology and conservation practices.**

Policy 11.2: Maintain local legislation to establish, update and implement energy performance building code requirements established under State Title 24 Energy Regulations.

Tustin City Code

Tustin City Code Article 8, Section 8100, *Building and Construction Codes Adopted by Reference by the City*, includes adoption of 2022 California Energy Code (Title 24, Part 6), The 2022 California Green Building Standards Code (Title 24, Part 11), and 2022 California Building Code (Title 24, Part 2), as well as other state standards.

5.2.3 ENVIRONMENTAL SETTING

5.2.3.1 Electricity

The Southern California Edison Company (SCE) is the electrical purveyor in the City of Tustin. SCE provides electricity service to more than 14 million people in a 50,000 square-mile area of central, coastal and Southern California. California utilities are experiencing increasing demands that require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity and increase the grid's capacity. SCE is in the process of implementing infrastructure upgrades to ensure the ability to meet future demands. In addition, as described by the Edison International 2022 Annual Report, the SCE electrical grid modernization effort supports implementation of California requirements to achieve carbon neutrality by 2045. The state has set Renewables Portfolio Standards that require retail sellers of electricity to provide 60 percent of power from renewable resources by 2030. The state also requires sellers of electricity to deliver 100 percent of retail sales from carbon-free sources by 2045, including interim targets of 90 percent by 2035 and 95 percent by 2040. In 2022 approximately 48 percent of power that SCE delivered to customers came from carbon-free resources (Southern California Edison, 2022).

The Project site is currently served by the electricity distribution systems that exist along the roadways adjacent to the Project site.

5.2.3.2 Natural Gas

The Southern California Gas Company (SoCalGas) is the natural gas purveyor in the City of Tustin and is the principal distributor of natural gas in Southern California. SoCalGas estimates that gas demand will decline at an annual rate of 1.5 percent from 2022 to 2035 due to modest economic growth, mandated energy efficiency standards and programs, renewable electricity goals, and fuel substitution (Southern California Gas Company, et. al., 2022). The gas supply available to SoCalGas is regionally diverse and includes supplies from California sources (onshore and offshore), Southwestern U.S. supply sources, the Rocky Mountains, and Canada. SoCalGas designs its facilities and supplies to provide continuous service during extreme peak demands and has identified the ability to meet peak demands through 2035.

The Project is within the service area of Southern California Gas Company (SoCal Gas).

5.2.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

ENE-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

ENE-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.2.5 METHODOLOGY

A number of factors are considered when weighing whether a project would use a proportionately large amount of energy or whether the use of energy would be wasteful in comparison to other projects. Factors such as the use of on-site renewable energy features, energy conservation features or programs, and relative use of transit are considered.

According to Appendix F of the CEQA Guidelines, conserving energy is defined as decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. Neither Appendix F of the CEQA Guidelines nor Public Resources Code Section 21100(b)(3) offer a numerical threshold of significance that might be used to evaluate the potential significance of energy consumption of a project. Rather, the emphasis is on reducing "the wasteful, inefficient, and unnecessary consumption of energy."

Construction activities would result in wasteful, inefficient, or unnecessary use of energy if construction equipment is old or not well maintained, if equipment is left to idle when not in use, if travel routes are not planned to minimize vehicle miles traveled, or if excess lighting or water is used during construction activities. Energy usage during project operation would be considered "wasteful, inefficient, and unnecessary" if the project were to violate federal, state, and/or local energy standards, including Title 24 of the California Code of Regulations, inhibit pedestrian or bicycle mobility, inhibit access to transit, or inhibit feasible opportunities to use alternative energy sources, such as solar energy, or otherwise inhibit the conservation of energy.

5.2.6 ENVIRONMENTAL IMPACTS

IMPACT ENE-1: THE PROJECT WOULD NOT RESULT IN POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES, DURING PROJECT CONSTRUCTION OR OPERATION.

Less than Significant Impact.

As identified in Section 3.0, *Project Description*, the existing uses that were modeled consists of the Enderle Center that is currently developed with 87,136 sq ft of commercial business uses, including 28,750 sq ft of restaurant use, 39,960 sq ft of retail and service use, and 18,426 sq ft of office use. The analysis was conducted using land use codes *High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, and *Parking Lot*. Trip generation rates used in CalEEMod for the existing uses were based on the trip generation rate of 7,058 ADT.

The analysis of the future buildout of the project site included the existing development, the buildout of 413 units, and the addition of the total remaining nonresidential use including a total of 67,837 sq ft of restaurant use, 94,288 sq ft of retail and service use, and 43,477 sq ft of office use. The analysis was conducted using land use codes *Apartments Mid Rise*, *High Turnover (Sit Down Restaurant), Strip Mall,* and *General Office Building* assuming a total trip generation of 18,528 ADT. This analysis assumes that the proposed project would not include any woodburning hearths or wood stoves. Where project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate Project impacts.

Potential future buildout of the Project would increase the demand for energy through day-to-day operations and fuel consumption associated with Project construction. This section discusses energy use resulting from buildout of the Project and evaluates whether the Project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Construction

Construction activities associated with the construction of additional housing units and remaining commercial buildout capacity that could occur with implementation of the project would be through the horizon year 2029, which would cause fuel consumption associated with construction activities. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include grading, site preparation, building construction, architectural coating, and paving activities. Construction activities require energy associated with the manufacture and transportation of building materials, grading activities, and building construction. Construction activities also typically require electricity to power construction-related equipment and do not involve the consumption of natural gas.

Transportation energy represents the largest energy use during construction and would be from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from a site would be anticipated to use diesel fuel, whereas construction workers traveling to and from a site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and the travel mode.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles were based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021. Fuel consumption estimates are presented in Table 5.2-1. CalEEMod output sheets and detailed energy calculations are included in Appendix B.

Table 5.2-1: Energy Consumption Estimates during Construction

Energy Type	Total Energy Consumption	Percentage of Increase Countywide
Diesel Fuel (total gallons)	117,690	0.07
Gasoline (total gallons)	148,345	0.01

Source: Compiled by LSA (March 2024).

As indicated in Table 5.2-1, development envisioned under the Project would consume approximately 117,690 gallons of diesel fuel and approximately 148,345 gallons of gasoline during construction. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, construction of future development as envisioned under the proposed project would increase the annual construction generated fuel use in Orange County approximately by approximately 0.07 percent for diesel fuel usage and by approximately 0.01 percent for gasoline fuel usage. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Orange County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. The project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would not be inefficient, wasteful, or unnecessary.

Operation

Operational activities associated with the 413 additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the Project would result in energy demand associated with natural gas use, electricity consumption, and fuel used for vehicle trips. Energy consumption was estimated for the proposed project using default energy intensities by land use type in CalEEMod. In addition, the proposed project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. Trip generation rates for the proposed project were based on the project's trip generation estimates. The existing uses generate approximately 7,058 ADT and the proposed project would generate approximately 18,528 ADT. The amount of operational fuel use was estimated using CARB's EMFAC2021 model, which provided projections for typical daily fuel usage in Orange County. Electricity, natural gas, and fuel usage estimates associated with the Project are shown in Table 5.2-2.

Table 5.2-2: Energy Consumption Estimates during Operation

Energy Type	Annual Energy Consumption
Existing Uses	
Electricity Consumption (kWh/year)	1,984,211
Natural Gas Consumption (therms/year)	40,171
Gasoline (gallons/year)	640,878
Diesel Fuel (gallons/year)	54,200
Full Buildout of the Project Site	
Electricity Consumption (kWh/year)	5,564,016
Natural Gas Consumption (therms/year)	140,666
Gasoline (gallons/year)	1,755,365

Diesel Fuel (gallons/year)	148,455
Net New Energy Usage (Project Buildout – Existing Uses)	
Electricity Consumption (kWh/year)	3,579,805
Natural Gas Consumption (therms/year)	100,495
Gasoline (gallons/year)	1,114,487
Diesel Fuel (gallons/year)	94,255

Source: Compiled by LSA (March 2024).
Wh = kilowatt-hours

As shown in Table 5.2-2, the estimated potential increase in electricity demand associated with development consistent with the proposed project is 3,579,805 kWh per year. Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Orange County by approximately 0.02 percent.

Additionally, as shown in Table 5.2-2, the estimated potential increase in natural gas demand associated with development consistent with the proposed project is 100,495 therms per year. Total natural gas consumption in Orange County in 2022 was 573 million therms (572,454,744 therms). Therefore, operation of the proposed project would increase the annual natural gas consumption in Orange County by approximately 0.02 percent.

Electrical and natural gas demand associated with future operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. All future development would be required to adhere to all federal, State, and local requirements for energy efficiency, including the latest Title 24 standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting, which would reduce energy usage.

Construction of the 413 additional housing units and remaining commercial buildout capacity would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. As shown in Table 5.2-2, the increase in fuel use associated with the vehicle trips generated by the proposed project is estimated at approximately 1,114,487 gallons of gasoline and 94,255 gallons of diesel fuel per year. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, vehicle trips associated with the proposed project would increase the annual fuel use in Orange County by approximately 0.09 percent for gasoline fuel usage and approximately 0.06 percent for diesel fuel usage. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Although future development, as envisioned under the proposed project would result in an increase in demand for electricity, this increase would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts because each of the opportunity sites are already served by utilities or directly adjacent to existing urban development. Similarly, expansion of natural gas infrastructure is not anticipated due to cumulative development. Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Orange County and the region. As such, the buildout associated with the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

IMPACT ENE-2: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY.

Less than Significant Impact.

In 2002, the Legislature passed SB 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators in implementing incentive programs for ZEVs and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC's *2023 Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. As indicated above, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in Orange County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, as demonstrated above, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy.

5.2.7 CUMULATIVE IMPACTS

The geographic context for analysis of cumulative impacts regarding energy includes past, present, and future development within southern California because energy supplies (including electricity, natural gas, and petroleum) are generated and distributed throughout the southern California region.

All development projects throughout the region would be required to comply with the energy efficiency standards in the Title 24 requirements. Additionally, some of the developments could provide for additional reductions in energy consumption by use of solar panels, sky lights, or other LEED-type energy efficiency infrastructure. With implementation of the existing energy conservation regulations, cumulative electricity and natural gas consumption would not be cumulatively wasteful, inefficient, or unnecessary.

Transportation energy use and gasoline demand would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development or to the total number of vehicle trips and VMT throughout Orange County and the region. For these reasons, the consumption of petroleum would not occur in a wasteful, inefficient, or unnecessary manner and would be less than cumulatively considerable.

5.2.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

State

- California Energy Code (Code of Regulations, Title 24 Part 6).
- CalGreen Building Standards Code

Plans, Programs, or Policies

These actions will be included in the Project's mitigation monitoring and reporting program (MMRP):

PPP E-1: CalGreen Compliance: The Project is required to comply with the CalGreen Building Code to ensure efficient use of energy. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.

5.2.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, Impacts E-1and E-2 would be less than significant.

5.2.10 MITIGATION MEASURES

Impacts related to energy would be less than significant and no mitigation measures are required.

5.2.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts related to energy would be less than significant.

5.2.12 REFERENCES

California Energy Commission. (2023). *2023 Integrated Energy Policy Report (Docket Number: 23 IEPR 01)*.

California Public Utilities Commission. (2019). *Renewables Portfolio Standard Program*. Retrieved from cpuc.ca.gov/rps (accessed January 2024)

LSA. (2024). *Air Quality, Energy, and Greenhouse Gas Impact Report, Enderle Center*.

Southern California Edison. (2022). *2022 Annual Report Edison International and Southern California Edison*. Retrieved from https://download.edison.com/406/files/20232/2022-eix-sce-annual-report.pdf?Signature=U4RDvQwS5mPYIU4qXT%2BouS9xKqQ%3D&Expires=1710973701&AWSAccessKeyId=AKIAJX7XEOOELCYGIVDQ&versionId=bpeN_aiySep67UMc7RtP511pq9M5I127&response-content-disposition=attachment

Southern California Gas Company, et. al. (2022). *2022 California Gas Report*. Retrieved from Southern California Gas Company: https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf

5.3 Greenhouse Gas Emissions

5.3.1 INTRODUCTION

This section of the Draft EIR evaluates greenhouse gas (GHG) emissions associated with the Project and its contribution to global climate change. Specifically, this section evaluates the extent to which GHG emissions from the Project contribute to elevated levels of GHGs in the Earth's atmosphere and, consequently, contribute to climate change. This section also addresses the Project's consistency with applicable plans, policies, and public agency regulations adopted for the purpose of reducing the emissions of GHGs. The analysis within this section is based on the following City documents and technical report in Appendix B:

- *City of Tustin General Plan* (including 2021-2029 Housing Element). Adopted November 2018 (updated October 2022).
- *Tustin City Code*
- *Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*, adopted April 2024.
- *Enderle Center Project Air Quality, Energy, and Greenhouse Gas Report*, LSA, March 2024, Appendix B.

5.3.2 REGULATORY SETTING

5.3.2.1 Federal Regulations

California Assembly Bill 1493– Pavley

In 2002, the California Legislature adopted AB 1493 requiring the adoption of regulations to reduce GHG emissions in the transportation sector. In September 2004, pursuant to AB 1493, the CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year (Pavley Regulations). In September 2009, CARB adopted amendments to the Pavley Regulations to reduce GHG from 2009 to 2016. CARB, EPA, and the U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) have coordinated efforts to develop fuel economy and GHG standards for model 2017-2025 vehicles. The GHG standards are incorporated into the "Low Emission Vehicle" (LEV) Regulations.

California Executive Order S-3-05 – Statewide Emission Reduction Targets

Executive Order S-3-05 was signed by Governor Arnold Schwarzenegger in June 2005. Executive Order S-3-05 establishes statewide emission reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 1279

Assembly Bill (AB) 1279 requires the state to achieve net zero greenhouse gas emissions (GHG) as soon as possible, but no later than 2045, and to achieve and maintain net negative greenhouse gas emissions thereafter. The bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels and directs the California Air Resources Board (CARB) to work with relevant state agencies to achieve these goals.

California Assembly Bill 32 (AB 32), Global Warming Solutions Act of 2006 (Chapter 488, Statutes of 2006)

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)], which created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required the California Air Resources Board (CARB or Board) to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated at least every five years. Since 2008, there have been two updates to the Scoping Plan. Each of the Scoping Plans has included a suite of policies to help the State achieve its GHG targets, in large part by leveraging existing programs whose primary goal is to reduce harmful air pollution. The 2017 Scoping Plan identifies how the State can reach the 2030 climate target to reduce greenhouse gas (GHG) emissions by 40 percent from 1990 levels, and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The AB 32 Scoping Plan also anticipates that local government actions will result in reduced GHG emissions because local governments have the primary authority to plan, zone, approve, and permit development to accommodate population growth and the changing needs of their jurisdictions. The Scoping Plan also relies on the requirements of Senate Bill 375 (discussed below) to align local land use and transportation planning for achieving GHG reductions.

The Scoping Plan must be updated every five years to evaluate AB 32 policies and ensure that California is on track to achieve the 2020 GHG reduction goal. In 2014, CARB released the First Update to the Scoping Plan, which builds upon the Initial Scoping Plan with new strategies and recommendations. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. This update defines CARB's climate change priorities for the next five years and sets the groundwork to reach long-term goals set forth in Executive Order S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals in the original 2008 Scoping Plan. It also evaluates how to align the state's "longer-term" GHG reduction strategies with other state policy priorities for water, waste, natural resources, clean energy, transportation, and land use.

In 2017, CARB released the proposed Second Update to the Scoping Plan, which identifies the State's post-2020 reduction strategy. The Second Update would reflect the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32.

On December 15, 2022, CARB adopted the 2022 Scoping Plan. The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB advocates compliance with a local GHG reduction strategy or climate action plan (CAP) consistent with CEQA Guidelines section 15183.5.

Senate Bill 375 (Chapter 728, Statutes of 2008)

In August 2008, the Legislature passed, and on September 30, 2008, Governor Schwarzenegger signed SB 375, which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck

sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations (MPOs) will be responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or Alternative Planning Strategy. On September 23, 2010, CARB adopted the SB 375 targets for the regional MPOs.

Executive Order B-30-15 – 2030 Statewide Emission Reduction Target

Executive Order B-30-15 was signed by Governor Jerry Brown on April 29, 2015, establishing an interim statewide GHG reduction target of 40 percent below 1990 levels by 2030, which is necessary to guide regulatory policy and investments in California in the midterm, and put California on the most cost-effective path for long-term emission reductions. Under this Executive Order, all state agencies with jurisdiction over sources of GHG emissions are required to continue to develop and implement emissions reduction programs to reach the state's 2050 target and attain a level of emissions necessary to avoid dangerous climate change. According to the Governor's Office, this Executive Order is in line with the scientifically established levels needed in the United States to limit global warming below 2°C - the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels.

Senate Bill 32 (Chapter 249, Statutes of 2016)

Senate Bill 32 was signed on September 8, 2016, by Governor Jerry Brown. SB 32 requires the state to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80 percent below 1990 levels by 2050. A related bill that was also approved in 2016, AB 197 (Chapter 250, Statutes of 2016) creates a legislative committee to oversee regulators to ensure that ARB is not only responsive to the Governor, but also the Legislature.

AB 398 – Extension of Cap and Trade Program to 2030 (Chapter 617, Statutes of 2017)

AB 398was signed by Governor Brown on July 25, 2017, and became effective immediately as urgency legislation. AB 398, among other things, extended the cap and trade program through 2030.

Senate Bill 97 (Chapter 185, Statutes of 2007)

SB 97 (Health and Safety Code Section 21083.5) was adopted in 2007 and required the Office of Planning and Research to prepare amendments to the CEQA Guidelines for the mitigation of GHG impacts. The amendments became effective on March 18, 2010. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of GHG emissions. The CEQA Section gives discretion to the lead agency whether to: (1) use a model of methodology to quantify GHG emissions resulting from a project, and which model or methodology to use;

or (2) rely on a qualitative analysis or performance-based standards. CEQA does not provide guidance to determine whether the project's estimated GHG emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. However, GHG mitigation measures are referenced in general terms, and no specific measures are identified. Additionally, the revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

The 2018 amendments to the CEQA Guidelines provided expanded guidance to lead agencies in evaluating GHG impacts, as outlined in Sections 15064.4 and 15064.7. A lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to evaluate a project's incremental contribution to climate change, provided that the model or methodology is supported by substantial evidence.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to Section 15183.5(b).

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CalGreen) is updated every three years. The most recent update was the 2022 California Green Building Code Standards that became effective on January 1, 2023.

The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, and strengthens ventilation standards, among other requirements. The California Energy Commission anticipates that the 2022 Energy Code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons.

The 2022 CALGreen standards that reduce GHG emissions and are applicable to the Project include, but are not limited to, the following:

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).

- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 SF or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 SF. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

The 2022 CalGreen Building Standards Code has been adopted by the Tustin City Code in Section 8100.

5.3.2.2 Local and Regional Regulations

City of Tustin General Plan

The City of Tustin addresses issues relevant to GHG emissions in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan. The Conservation, Open Space, and Recreation Element contains policies that work to reduce GHG emissions. The following policies are applicable to the Project:

Goal 1: **Reduce air pollution through proper land use, transportation and energy use planning.**

Policy 1.1: Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.

Policy 1.2: Design safe and efficient vehicular access to commercial land uses from arterial streets to insure efficient vehicular ingress and egress.

Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.7: Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.

Goal 2: **Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.**

Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.6: Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.

Policy 2.7: Encourage employer rideshare and transit incentives programs by local businesses.

Policy 2.8: Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

5.3.3 ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are contributing to global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential, and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry

as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG, with 22,800 times the global warming potential as CO_2. Therefore, an emission of one metric ton (MT) of SF_6 could be reported as an emission of 22,800 MT of CO_2e. Large emission sources are reported in million metric tons (MMT) of CO_2e. The principal GHGs are described below, along with their global warming potential.

Carbon dioxide: Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (manmade) sources are from burning coal, oil, natural gas, and wood.

Methane: Methane (CH_4) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years, and its global warming potential is 28. Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.

Nitrous oxide: Nitrous oxide (N_2O) (laughing gas) is a colorless GHG that has a lifetime of 121 years, and its global warming potential is 265. Sources include microbial processes in soil and water, fuel combustion, and industrial processes.

Sulfur hexafluoride: Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas that has a lifetime of 3,200 years and a high global warming potential of 23,500. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.

Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Their global warming potential ranges from 7,000 to 11,000. Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are a group of GHGs containing carbon, chlorine, and at least one hydrogen atom. Their global warming potential ranges from 100 to 12,000. Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Some of the potential effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more forest fires, and more drought years. Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects:

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

There are also many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal.

Global Emissions

Worldwide emissions of GHGs in 2020 totaled 22.9 billion metric tons (MT) of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.

United States Emissions

In 2021, the year for which the most recent data are available, the United States emitted about 5,586.0 million metric tons of CO_2e (MMT CO_2e) after accounting for sequestration from the land sector. Overall, net emissions increased 6.4 percent from 2020 to 2021, and decreased 16.6 percent from 2005 levels. The increase in total GHG emissions was driven by an increase in CO_2 emissions from fossil fuel combustion.

In 2021, CO2 emissions from fossil fuel combustion increased by 7 percent relative to the previous year. This increase in fossil fuel consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic. Of the five major sectors—residential and commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2021 (approximately 28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent (U.S. Environmental Protection Agency, 2023).

State of California Emissions

The State emitted approximately 381.3 MMT CO_2e emissions in 2021, 12.1 MMT CO_2e higher than 2020 levels and 49.7 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e. CARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sectors included industrial sources at approximately 19 percent, and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high Global Warming Potentials (GWP) such as refrigerants at 6 percent, and waste at 2 percent.

5.3.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

CEQA Guidelines Section 15064.4 provides discretion to the lead agency whether to: (1) use a model of methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. In addition, CEQA does not provide guidance to determine whether the project's estimated GHG emissions are significant, but recommends that lead agencies consider several factors that may be used in the determination of significance of project related GHG emissions, including:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15130(f) describes that the effects of GHG emissions are by their very nature cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis. Additionally, CEQA Guidelines Section 15064(h)3 states that a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides requirements to avoid or lesson the cumulative problem.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- Tier 1. Exemptions: If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- Tier 2. Consistency with a locally adopted GHG Reduction Plan: If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- Tier 3. Numerical Screening Threshold: If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. The 10,000 MT of CO2e per year (MT CO2e/yr) threshold for industrial uses would be recommended for use by all lead agencies. Under Option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO2e/yr), commercial projects (1,400 MT CO2e/yr), and mixed-use projects (3,000 MT CO2e/yr). Under Option 2, a single numerical screening-level threshold of 3,000 MT CO2e/yr would be used for all non-industrial projects.

- Tier 4. Performance Standards: If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target; Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT CO2e/yr per service population (for project-level analyses and 6.6 MT CO2e/yr per service population for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

  Rate of Emission: GHG Emissions (MT CO2e/yr) ÷ Service Population

  The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State

of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

Relative to the 2035 target date, this target date was selected to be consistent with the GHG reduction target date of SB 375. Overall, GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. This 40 percent reduction was applied to the 2020 targets, resulting in an efficiency threshold for plans of 4.1 MT CO2e/yr and an efficiency threshold at the project level of 3.0 MT CO2e/yr.

For the purpose of this analysis, the Project will first be compared to the SCAQMD screening-level Tier 3 Numerical Screening Threshold of 3,000 MT CO2e/yr for all land use type projects. If it is determined that the Project is estimated to exceed this numerical threshold, it will then be compared to the SCAQMD-recommended 2035 efficiency-based plan-level threshold of 4.1 MT CO2e/yr per service population. The plan-level threshold is appropriate for use in this analysis since this analysis evaluates buildout at The Enderle Center at the plan level, including the 413 units allowed under the Housing Overlay Zone and remaining commercial buildout capacity associated with the proposed Project. In addition, the Project is also evaluated for compliance with the 2022 Scoping Plan and the 2024–2050 RTP/SCS.

5.3.5 METHODOLOGY

The California Emissions Estimator Model (CalEEMod) v2022.1.1.20 has been used to determine construction and operational GHG emissions for buildout of the Project, based on the maximum development assumptions outlined in Section 3.0*, Project Description*. The purpose of this model is to calculate construction-source and operational-source GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from measures incorporated into the Project to reduce or minimize GHG emissions. For construction phase Project emissions, GHGs are quantified and, per SCAQMD methodology, the total GHG emissions for construction activities are divided by 30-years, and then added to the annual operational phase of GHG emissions.

In addition, CEQA requires the lead agency to consider the extent to which the Project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Therefore, this section addresses whether the Project complies with various programs and measures designed to reduce GHG emissions. There is no Statewide program or regional program or plan that has been adopted with which all new development must comply; thus, this analysis has identified the regulations most relevant to the City of Tustin and the Project.

Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the Project area.

5.3.6 ENVIRONMENTAL IMPACTS

IMPACT GHG-1: THE PROJECT WOULD GENERATE GREENHOUSE GAS EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT.

An Air Quality, Energy, and Greenhouse Gas Impact Report was prepared for the Project (LSA, 2024). The analysis and conclusions are incorporated into the discussion below. The full report can be found in Appendix B.

Significant and Unavoidable.

As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, The Enderle Center (the Project site) was identified as having capacity for 413 housing units on seven acres of the existing Center's parking lots (equating to 59 dwelling units per acre). Additionally, the Project site has additional existing nonresidential capacity. The Project site is assumed to be developed with 205,610 SF of nonresidential uses. The Enderle Center is currently developed with 87,136 SF of commercial businesses, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, and 18,426 SF of office use. Therefore, the total remaining nonresidential use assumed for future buildout of the Project site is 118,474 SF. The analysis below considers potential future buildout of 413 residential units (high density multifamily) and the remaining commercial buildout capacity.

Construction

Construction activities associated with the construction of additional housing units and remaining commercial buildout capacity would cause short-term GHG emissions. Construction activities with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, the SCAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined by the SCAQMD as 30 years, added to the operational emissions, and compared to the applicable interim GHG significance threshold tier.

As discussed under Section 5.1, *Air Quality,* and shown in Table 5.1-6, information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 413 units and remaining commercial buildout capacity associated with the Project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a Project construction schedule based on a start date of October 2024 and a construction period of two years (construction ending April 2026). Using CalEEMod, it is estimated that development envisioned under the Project would generate approximately 1,522.9 MT CO_2e during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 50.8 MT CO_2e.

Operation

Operational activities associated with the additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the Project would result in long-term GHG emissions associated with mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and

landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Energy source emissions would be generated at off-site utility providers because of the increased electricity demand generated by the project. Waste source emissions generated by the Project include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the Project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Following guidance from the SCAQMD, GHG emissions were estimated using CalEEMod. Table 5.3-1 shows the calculated GHG emissions for development consistent with the Project.

As discussed above, according to SCAQMD, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 3,000 MT CO2e/yr. Based on the analysis results, full buildout of the development envisioned under the Project would result in a net increase of 12,804 MT CO_2e/yr, which would exceed the SCAQMD threshold of 3,000 MT CO_2e/yr. Therefore, consistent with the SCAQMD's interim guidance, the following discussion compares the proposed Project to the efficiency-based threshold.

The development of 413 housing units would result in approximately 1,189 additional residents based on the estimated 2.88 persons per household in Tustin. In addition, the proposed Project would include an additional 39,087 sq ft of restaurant use, 54,328 sq ft of retail and service use, and 25,051 sq ft of office use. Future development, as envisioned under the proposed Project, would result in 365 new employees. The total service population (residents plus employees) would be 1,554 persons. The proposed project would result in per service population emissions of 8.2 metric tons of CO_2 per year per service population (MT CO_2e/yr/SP), which would exceed the SCAQMD's plan-level screening threshold of 4.1 MT CO_2e/yr/SP. Therefore, operation of the proposed Project would generate significant GHG emissions that would have a significant effect on the environment.

Table 5.3-1: Greenhouse Gas Emissions (MT/yr)

Emissions Source	Operational Emissions (MT/yr)			
	CO2	CH4	N2O	CO2e
Existing Uses				
Existing Uses Mobile Sources	6,169.3	0.3	0.3	6,271.5
Existing Uses Area Sources	1.8	<0.1	<0.1	1.8
Existing Uses Energy Sources	691.7	<0.1	<0.1	694.2
Existing Uses Water Sources	29.3	0.5	<0.1	45.0
Existing Uses Waste Sources	35.8	3.6	0.0	125.3
Total Existing Uses Emissions	**6,927.9**	**4.4**	**0.3**	**7,137.8**
Full Buildout of the Project Site				
Project Buildout Mobile Sources	16,874.0	0.9	0.7	17,151.0
Project Buildout Area Sources	100.0	<0.1	<0.1	100.2
Project Buildout Energy Sources	2,088.8	0.1	<0.1	2,096.0
Project Buildout Water Sources	99.6	1.7	<0.1	152.9
Project Buildout Waste Sources	111.7	11.2	<0.1	390.9
Project Buildout Emissions	**19,274.1**	**13.9**	**0.7**	**19,891.0**

Amortized Construction Emissions	50.8
Total Project Buildout Annual Emissions	**19,941.8**
Net New Emissions (Project Buildout – Existing Uses)	**12,804.0**
SCAQMD Threshold	3,000
Exceed?	Yes
Per Service Population Emissions	**8.2**
SCAQMD Efficiency Target Threshold	4.1
Exceed?	**Yes**

Source: Compiled by LSA (March 2024).
CH4 = methane
CO2 = carbon dioxide
CO2e = carbon dioxide equivalent MT/yr = metric tons per year
N2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

However, as identified above, before development can occur, once a specific development project is proposed, it would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. As demonstrated above, the likely scale and extent of build out associated with future projects is unknown; however, this analysis assumes the most conservative estimate that would likely exceed the SCAQMD thresholds. As such, implementation of Mitigation Measure GHG-1 would require a project-specific assessment of potential GHG impacts and implementation of feasible mitigation measures to reduce GHG emissions for future projects allowed under the proposed Project. While Mitigation Measure GHG-1 would serve to reduce GHG emissions associated with buildout of the Project, GHG emission impacts would remain significant and unavoidable because compliance with future efficiency targets cannot be assured and not enough information is known regarding future projects to recommend further mitigation.

IMPACT GHG-2: THE PROJECT WOULD CONFLICT WITH AN APPLICABLE PLAN, POLICY OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSIONS OF GREENHOUSE GASES.

Significant and Unavoidable.

An evaluation of the Project's consistency with the 2022 Scoping Plan and the 2024–2005 RTP/SCS is provided below.

2022 Scoping Plan

The following discussion evaluates the Project according to the goals of the 2022 Scoping Plan, EO B-30-15, AB 1279, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016. AB 1279 establishes State policy to achieve net zero

GHG emissions no later than 2045 and for Statewide anthropogenic GHG emissions to be reduced to at least 85 percent below 1990 levels by 2045.

In addition, the 2022 Scoping Plan assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. Buildout of the Project would be required to comply with the latest Title 24 and CALGreen Code standards regarding energy conservation and green building standards. Therefore, the Project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, buildout associated with the Project would be required to comply with the latest Title 24 and CALGreen Code standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the Project would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the Project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the Project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a three percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the Project would not conflict with the identified transportation and motor vehicle measures.

2024–2050 Regional Transportation Plan/Sustainable Communities Strategy

SCAG's RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2024–2050 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all

roadway users, preserve the transportation system, and expand transit and foster development in transit-oriented communities. The 2024–2050 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2024–2050 RTP/SCS, would reach the GHG emissions reduction target set by CARB, including the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2024–2050 RTP/SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the 2024–2050 RTP/SCS but provides incentives for consistency for governments and developers.

The objectives of the 2024–2050 RTP/SCS are to create a region with: transit as a backbone of the transportation system; more Complete Streets where people and safety are prioritized; policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; more housing to address the existing housing need as defined by the RHNA; safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies.

With respect to determining the Project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024– 2050 RTP/SCS, in 2019, the City's population was 80,400 residents and the City had 27,000 households and 51,700 jobs. Households are forecast to increase by approximately 6,800 households by 2035 and 7,000 households by 2050 and employment are forecast to increase by approximately 14,600 jobs by 2035 and 19,600 jobs by 2050. (Southern California Association of Governments, 2024).

As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, Enderle Center (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. The proposed project would accommodate up to 413 housing units to help the City meet its RHNA allocation.

The development of 413 housing units would result in approximately 1,189 additional residents based on the estimated 2.88 persons per household average in Tustin (State of California Department of Finance, 2023). Future development implemented in accordance with the proposed Housing Overlay Zone would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the General Plan. Therefore, since the purpose of the proposed Project is to accommodate planned regional housing growth included in the SCAG RHNA, the proposed Project would not exceed the growth assumptions in the SCAG's RTP/SCS or the AQMP. Based on the nature of the proposed Project, it is anticipated that implementation of the proposed Project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS.

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. The proposed Project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035.

Although the proposed Project would be consistent with the identified measures and goals from the 2022 Scoping Plan and 2024–2050 RTP/SCS, the proposed Project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in

the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed Project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

5.3.7 CUMULATIVE IMPACTS

This section presents information regarding potential cumulative impacts associated with the proposed project. As defined in the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area. Table 5-1 in Section 5.0, *Environmental Impact Analysis*, provides a list of cumulative projects; however, because of the lack of available emissions data for the cumulative projects, cumulative emissions were not evaluated quantitatively. Table 5-1 lists the cumulative projects and provides a brief description and the distances from the Project site and Figure 5-1 includes a map of the various cumulative projects considered. The list includes two projects within the City of Santa Ana, and six projects within the City of Tustin.

GHG impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in GHG emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the U.S. or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

As previously stated, GHG emissions associated with the buildout under the proposed Project would exceed the SCAQMD thresholds of 3,000 MT CO_2e/yr and 4.1 MT CO_2e/yr/SP. Since GHG is a global issue, it is unlikely that the proposed Project would generate enough GHG emissions to influence GHG emissions on its own; however, because Project-related CO_2e emissions would exceed the SCAQMD's thresholds, the proposed Project would have a significant contribution to cumulatively considerable GHG emission impacts.

5.3.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

State

- Clean Car Standards – Pavley Assembly Bill 1493
- California Executive Order S-3-05
- Assembly Bill 32 (Global Warming Solutions Act of 2006)
- Senate Bill 375
- California Executive Order B-30-15
- Senate Bill 32
- California Green Building Standards Code (Code of Regulations, Title 24 Part 6)

Plans, Programs, or Policies

PPP E-1: CALGreen Compliance. Listed previously in Section 5.2, *Energy*.

5.3.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact GHG-1 and Impact GHG-2 would be potentially significant.

5.3.10 MITIGATION MEASURES

Mitigation Measure GHG-1. Prior to building permit approval by the City of Tustin (City) for future development projects, project applicants shall prepare and submit a technical assessment evaluating potential project-related greenhouse gas (GHG) impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related GHG emissions exceed applicable SCAQMD thresholds of significance and/or Statewide GHG reduction targets, the City shall require that applicants for new development projects incorporate mitigation measures to reduce GHG emissions. Mitigation measures could include, but are not limited to: energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the project's approval.

5.3.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact GHG-1 and Impact GHG-2 would be significant and unavoidable.

5.3.12 REFERENCES

City of Tustin. (2018, November). *City of Tustin General Plan*. Retrieved from https://www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF

LSA. (2024). *Enderle Center Project Air Quality, Energy, and Greenhouse Gas Impact Report.*

Southern California Air Quality Management District. (1993, April). *CEQA Air Quality Handbook*. Retrieved from https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)

Southern California Association of Governments. (2024, April). *Connect SoCal 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy*. Retrieved from https://scag.ca.gov/connect-socal

State of California Department of Finance. (2023, May). *Population and Housing Estimates for Cities, Counties, and the State — January 1, 2022 and 2023*. Retrieved from https://dof.ca.gov/forecasting/demographics/estimates-e1/

U.S. Environmental Protection Agency. (2023). *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021*. Retrieved from https://www.epa.gov/system/files/documents/2023-04/US-GHG-Inventory-2023-Main-Text.pdf

This page intentionally left blank.

5.4 Land Use and Planning

5.4.1 INTRODUCTION

In accordance with CEQA Guidelines Section 15125(d), this section provides a summary of the plans, policies, and regulations of the City of Tustin, and regional, State, and federal agencies that have policy and regulatory control over the Enderle Center area and the proposed Project. Policy conflicts do not, in and of themselves, indicate a significant environmental effect within the meaning of CEQA. To the extent that physical environmental impacts may result from such conflicts, those impacts are analyzed in this EIR in the specific topical sections to which the impact pertains (e.g., noise, air quality, greenhouse gas emissions, or transportation). More specifically, this section examines the potential for the proposed Enderle Center Rezone Project to physically divide an established community and/or conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect, including relevant goals and policies of the recently updated City of Tustin General Plan (2018), the Tustin City Code, and the SCAG Final 2020-2045 and 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), "Connect SoCal".

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018, updated October 2022).
- *Tustin City Code*
- *Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS),* adopted September 2020.
- *Connect SoCal 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS),* adopted April 2024.

5.4.2 REGULATORY SETTING

5.4.2.1 State Regulations

California Planning and Zoning Law

The legal framework under which California cities and counties exercise local planning and land use functions is set forth in California Planning and Zoning Law, Government Code Sections 65000-66499.58. Under State planning law, each city and county must adopt a comprehensive, long-term General Plan (GP). State law gives cities and counties wide latitude in how a jurisdiction may create a GP, but there are fundamental requirements that must be met. As stated in Section 65302 of the California Government Code, "The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principle, standard, and plan proposals." While a GP will contain the community vision for future growth, California law also requires each plan to address the mandated elements listed in Section 65302. The mandatory elements for all jurisdictions are land use, circulation, housing, conservation, open space, noise, and safety. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals.

5.4.2.2 Local and Regional Regulations

SCAG Final 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), (Connect SoCal 2020)

The Southern California Association of Governments (SCAG) is designated by federal law as a Metropolitan Planning Organization (MPO) and under State law as a Regional Transportation Planning Agency and a Council of Governments. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 cities in an area covering more than 38,000 square miles. SCAG develops transportation and housing strategies for Southern California as a whole.

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS), which includes long range regional transportation plans, regional transportation improvement programs, regional housing needs allocations, and other plans for the region. Most of the plan's goals are related to regional transportation infrastructure and the efficiency of transportation in the region. SCAG is required by federal law (23 U.S.C. Section 134 et seq.) to prepare and update the long-range RTP/SCS every four years in order to readjust its vision for the future, assess challenges, and rearticulate goals. On April 4, 2024, SCAG approved "Connect SoCal," the 2024-2050 RTP/SCS. Connect SoCal 2024 outlines a vision for a more resilient and equitable future, with investment, policies and strategies for achieving the region's shared goals through 2050.

The following SCAG Connect SoCal sustainable community land use related policies are intended to be supportive of implementing the RTP/SCS. Several are directly tied to supporting related GHG reductions while others support the broader goals of Connect SoCal:

Focus Growth Near Destinations & Mobility Options

- Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations.
- Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets.
- Plan for growth near transit investments and support implementation of first/last mile strategies.
- Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses.
- Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods.
- Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed-uses or locating and orienting close to existing destinations).
- Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking).

Promote Diverse Housing Choices

- Preserve and rehabilitate affordable housing and prevent displacement.
- Identify funding opportunities for new workforce and affordable housing development.
- Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply.
- Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions.

Leverage Technology Innovations

- Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space.
- Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments.
- Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation.

Support Implementation of Sustainability Policies

- Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions.
- Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations.
- Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space.
- Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies.
- Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region.
- Continue to support long range planning efforts by local jurisdictions.
- Provide educational opportunities to local decisionmakers and staff on new tools, best practices, and policies related to implementing the Sustainable Communities Strategy.

Promote a Green Region

- Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards.
- Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration.
- Integrate local food production into the regional landscape.
- Promote more resource efficient development focused on conservation, recycling, and reclamation.
- Preserve, enhance, and restore regional wildlife connectivity.
- Reduce consumption of resource areas, including agricultural land.
- Identify ways to improve access to public park space.

City of Tustin General Plan

The City of Tustin GP is the City's principal long-range policy and planning document guiding the development, conservation, and enhancement of Tustin. The GP was adopted by the City in 2018 and contains seven elements that provide a comprehensive collection of goals and policies related to the physical development of the City. The City is also required by State law to periodically update its Housing Element, a mandatory component of the City's GP. The update to the Housing Element was adopted by the City in 2021 and certified by the State of California Housing and Community Development Department (HCD) in 2022. The GP goals and policies that are relevant to the proposed Project are listed below by GP Element.

Land Use Element

Goal 1: **Provide for a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City services.**

Policy 1.1: Preserve the low-density quality of Tustin's existing single-family neighborhoods while permitting compatible multi-family development to meet regional housing needs where best suited from the standpoint of current development, accessibility, transportation and public facilities.

Policy 1.2: Provide for and encourage the development of neighborhood-serving commercial uses in areas of Tustin presently underserved by such uses. Encourage the integration of retail or service commercial uses on the street level of office projects.

Policy 1.6: Ensure an adequate supply of commercial and industrial land within the City of Tustin for potential commercial and industrial expansion and development.

Policy 1.7: As part of the City's attraction to business and industry, provide adequate sites to house future employees.

Policy 1.10: Ensure that the distribution and intensity of land uses are consistent with the Land Use Plan and classification system.

Policy 1.11: Where feasible, increase the amount and network of public and private open space and recreational facilities which will be adequate in size and location to be useable for active or passive recreation as well as for visual relief.

Goal 2: **Ensure that future land use decisions are the result of sound and comprehensive planning.**

Policy 2.1: Consider all General Plan goals and policies, including those in other General Plan elements, in evaluating proposed development projects for General Plan consistency.

Goal 3: **Ensure that new development is compatible with surrounding land uses in the community, the City's circulation network, availability of public facilities, existing development constraints and the City's unique characteristics and resources.**

Policy 3.7: Encourage the preservation and enhancement of public vistas, particularly those seen from public places.

Goal 4: **Assure a safe, healthy and aesthetically pleasing community for residents and businesses.**

Policy 4.1: Mitigate traffic congestion and unacceptable levels of noise, odors, dust and light and glare which affect residential areas and sensitive receptors.

Policy 4.2: Ensure a sensitive transition between commercial or industrial uses and residential uses by means of such techniques as buffering, landscaping and setbacks.

Policy 4.3: Where mixed uses are permitted, ensure compatible integration of adjacent uses to minimize conflicts.

Goal 6: **Improve urban design in Tustin to ensure development that is both architecturally and functionally compatible, and to create uniquely identifiable neighborhoods, commercial and business park districts.**

Policy 6.2: Encourage and promote high quality design and physical appearance in all development projects.

Policy 6.4: Preserve and enhance the City's special residential character and "small town" quality by encouraging and maintaining Tustin's low density residential neighborhoods through enforcement of existing land use and property development standards and the harmonious blending of buildings and landscape.

Policy 6.9: Upgrade the visual quality of edge conditions between industrial and residential uses through street tree planting and on-site landscaping.

Policy 6.12: Review and revise, as necessary, the City's development standards to improve the quality of new development in the City and to protect the public health and safety.

Goal 8: **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

Policy 8.1: Encourage within economic capabilities, a wide range of accessible public facilities and community services including fire and police protection, flood control and drainage, educational, cultural and recreational opportunities and other governmental and municipal services. Senate Bill (SB) 50, adopted in 1998, prohibits the City from using the inadequacy of school facilities as a basis for denying or conditioning the development of property. SB 50, however, gave school districts new authority to raise school impact mitigation fees. In addition, the voters passed Proposition 1A in November 1998, which provides $9.2 billion dollars in bonds to construct new or expand existing schools. In summary, school districts have the financial means and legal authority to respond to new development

Policy 8.7: To ensure an orderly extension of essential services and facilities, and preservation of a free-flowing circulation system, continue to require provision of essential facilities and services at the developer's expense where these systems do not exist or are not already part of the City's financed capital improvement program.

Policy 8.8: Maintain and improve, where necessary, the City's infrastructure and facilities.

Goal 9: **Continue to provide for a planned community in East Tustin compatible with the land use characteristics of the local area and sensitive to the natural environment.**

Policy 9.6: Retain natural landscape to the maximum extent possible, and incorporate planting in new development areas compatible with the character and quality of the natural surrounding environment.

Housing Element

Goal 1: **Provision of an adequate supply of housing to meet the need for a variety of housing types and the diverse socio-economic needs of all community residents commensurate with the City's identified housing needs in the RHNA allocation.**

Policy 1.1: Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.

Policy 1.4: Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units, affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.

Policy 1.5: Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for the construction of higher density housing, affordable housing, and mixed-use development (the vertical and horizontal integration of commercial and residential uses) in proximity to employment opportunities, community facilities and services, and amenities.

Goal 2: Promote fair housing opportunities for all people regardless of their special characteristics as protected under state and federal fair housing laws.

Policy 2.3: Promote the dispersion and integration of housing for low- and very-low income families throughout the community.

Policy 2.6: Promote fair housing opportunities by supporting the continuation of policies that require relocation assistance, and/or to provide incentives and assistance for purchase of the units by low- and moderate-income households.

Goal 5: Ensure that new housing is sensitive to the existing natural and built environment.

Policy 5.1: Prioritize sustainable housing developments in proximity to services and employment centers thereby enabling the use of public transit, walking or bicycling and promoting an active lifestyle.

Policy 5.2: Promote green building practices for more sustainable energy conservation measures in the construction of new housing or rehabilitated units.

Housing Element Programs

The 2021-2029 Housing Element included several housing programs to be implemented during the 2021-2029 planning period.

Program 1.2a

Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in Tustin City Code Section 9272 (Design Review) and adopt new Objective Design Standards (ODS) to ensure that the City can provide clear guidance regarding project design, in order to streamline the development of high-quality residential development. The ODS would include provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a is anticipated to be complete in October 2024.

Program 1.2c

Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development, and allowance of parking structures and parking lifts, by right and subject to the ODS.

Circulation Element

Goal 1: Preserve the low-density quality of Tustin's existing single-family neighborhoods while permitting compatible multi-family development to meet regional housing needs where

best suited from the standpoint of current development, accessibility, transportation and public facilities.

Policy 1.2: Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.

Policy 1.3: Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.

Policy 1.4: Develop and implement thresholds and performance standards for acceptable levels of service.

Policy 1.10: Require that proposals for major new developments include a future traffic impact analysis which identifies measures to mitigate any identified project impacts.

Policy 1.11: Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.

Policy 1.13: Minimize effects of transportation noise wherever possible so as to comply with the Noise Element.

Policy 1.15: Ensure construction of existing roadways to planned widths, as new developments are constructed.

Policy 1.16: Continue to require dedication of right-of-way and construction of required public improvements on streets adjacent to construction projects at the developer's expense.

Goal 5: Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.

Policy 5.2: Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.

Policy 5.5: Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.

Goal 6: Increase the use of non-motorized modes of transportation.

Policy 6.1: Promote the safety of pedestrians and bicyclists by adhering to uniform standards and practices, including designation. of bicycle lanes, off-road bicycle trails, proper signage, and adequate sidewalk, bicycle lane, and off-road bicycle trail widths.

Policy 6.2: Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.

Policy 6.8: Support retrofit installation of sidewalks in industrial districts and Planned Community Business Parks as development occurs.

Policy 6.14: Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.

Goal 7: Provide for well-designed and convenient parking facilities.

Policy 7.1: Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials.

Policy 7.2: Provide sufficient off-street parking for all land uses.

Conservation, Open Space, and Recreation Element

Goal 1: Reduce air pollution through proper land use, transportation and energy use planning.

Policy 1.1: Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.

Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.4: Develop neighborhood parks near concentrations of residents to encourage pedestrian travel to the recreation facilities.

Policy 1.6: Cooperate and participate in regional air quality management plans, programs, and enforcement measures.

Goal 2: Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.

Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.12: Implement land use policy contained in the Land Use Element toward the end of achieving jobs/housing balance goals.

Goal 3: Reduce particulate emissions to the greatest extent feasible.

Policy 3.1: Adopt incentives, regulations, and/or procedures to minimize particulate emissions from paved and unpaved roads, agricultural uses, parking lots, and building construction.

Goal 4: Reduce emissions through reduced energy consumption.

Policy 4.1: Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

Goal 5: Protect water quality and conserve water supply.

Policy 5.2: Protect groundwater resources from depletion and sources of pollution.

Policy 5.3: Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.

Policy 5.5: Protect water quality by responsible agency support of enforcement of water quality standards for water imported into the County, and to preserve the quality of water in the groundwater basin and streams.

Goal 7: Conserve and protect natural plant and animal communities.

Policy 7.1: Inventory unique or significant tree stands, with particular attention given to the cedar stand, eucalyptus groves, and eucalyptus windrows in East Tustin. Develop standards to retain or incorporate the eucalyptus windrows and groves into development plans where feasible. The redwood/sequoia stand has been retained within a park site and integrated into the park design.

Policy 7.2: Conserve important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands through the practice of creative site planning, revegetation, and open space easements/dedications.

Policy 7.4: Require new development to revegetate graded areas.

Goal 8: Conserve and protect significant topographical features, important watershed areas, resources, and soils.

Policy 8.1: Develop standards to preserve the unique variety of land forms indigenous in hillside areas, and ensure that the development process is structured to ensure that grading and siting practice reflects the natural topography.

Policy 8.2: Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.

Policy 8.3: Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.

Policy 8.5: Review applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas.

Policy 8.6: Site planning and architectural design shall respond to the natural landform whenever possible to minimize grading and viewshed intrusion.

Policy 8.8: Require geotechnical studies for developments that are proposed for steep slopes and where geological instability may be suspected. Where a precise location of the El Modena fault is determined, appropriate building setbacks shall be established per State law.

Policy 8.10: Mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, and sensitive habitats through the environmental review process.

Policy 8.16: Site buildings and align roadways to maximize public visual exposure to natural features.

Goal 10: Reduce solid waste produced within City.

Policy 10.2: Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.

Goal 11: Conserve energy resources through use of available energy technology and conservation practices.

Policy 11.2: Maintain local legislation to establish, update and implement energy performance building code requirements established under State Title 24 Energy Regulations.

Goal 12: Maintain and enhance the City's unique culturally and historically significant building sites or features.

Policy 12.2: Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.

Goal 13: Preserve Tustin's archaeological and paleontological resources.

Policy 13.1: Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.

Policy 13.2: Require mitigation measures where development will affect archaeological or paleontological resources.

Goal 14: Encourage the development and maintenance of a balanced system of public and private parks, recreation facilities, and open spaces that serves the needs of existing and future residents in the City of Tustin.

Policy 14.8: Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.

Policy 14.12: Ensure that the City's laws and related implementation tools relating to park dedication and development (e.g., ordinances, regulations, in-lieu fee schedules, etc.) reflect current land and construction costs, and are, in fact, providing adequate park land and facilities concurrent with population growth.

Goal 17: Operate and maintain existing and future parks and recreation facilities so they are safe, clean, and attractive to the public; and preserve, protect, and enhance both existing and potential natural recreation areas to ensure that long-term public investments and values are not unreasonably preempted, compromised, or prevented by neglect or short-term considerations.

Policy 17.2: Require park designs (including landscape treatments, buildings, irrigation, etc.) that are durable, reasonably standardized, and economical to maintain.

Goal 18: Ensure that the recreational goals and policies are pursued and realized in an organized, incremental, and cost effective manner and consistent with the City of Tustin's financial resources and legal authorities and the appropriate responsibilities of other agencies, the private sector, and individual and group users.

Policy 18.5: Conserve the City's Quimby Act authority by utilizing, wherever practicable, the City's broad powers to enact and enforce its General Plan, Specific Plan(s), Redevelopment Plan(s), subdivision ordinance and Zoning Ordinance to secure public and private recreation sites, open space, trails, and other related land use objectives of community planning significance.

Public Safety Element

Goal 1: Reduce the risk to the community's inhabitants from flood hazards.

Policy 1.1: Identify flood hazard areas and provide appropriate land use regulations for areas subject to flooding.

Policy 1.5: Require detention basins as a flood control measure where applicable to reduce the risk from flood hazards.

Goal 3: Reduce the risk to the community from geologic and seismic hazards.

Policy 3.1: Require review of soil and geologic conditions by a State-Licensed Engineering Geologist to determine stability prior to the approval of development where appropriate.

Policy 3.5: Ensure that structures for human occupancy, critical structures, and vital emergency facilities are designed to minimize damage from potential geologic/seismic hazards and avoid functional impairment.

Policy 3.7: Include and periodically review and update emergency procedures for earthquakes in the City's Emergency Preparedness Plan.

Goal 4: Reduce the risk to the community's inhabitants from exposure to hazardous materials and wastes.

Policy 4.3: Transportation of hazardous waste will be minimized and regulated where possible to avoid environmentally sensitive areas and populated, congested, and dangerous routes.

Policy 4.5: Establish regulations requiring land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials to be located a safe distance from other land uses that may be adversely affected by such activities.

Policy 4.15: Coordinate with the County of Orange in the implementation of the National Pollution Discharge Elimination System Permits (NPDES) regulations.

Goal 5: Reduce the risk to the community's inhabitants from fires or explosions.

Policy 5.4: Enforce building code requirements that assure adequate fire protection.

Policy 5.6: Cooperate with Orange County Fire Authority to ensure the provision of adequate and cost-effective fire protection services.

Goal 6: Stabilize demand for law enforcement services.

Policy 6.1: Provide appropriate levels of police protection within the community.

Policy 6.5: Promote the use of defensible space concepts (site and building lighting, visual observation of open spaces, secured areas, etc.) in project design to enhance public safety.

Goal 8: Improve the City's ability to respond to natural and manmade emergencies.

Policy 8.1: Maintain an up-to-date Emergency Operations Plan identifying all available resources and funds for use in the event of a disaster and establishing implementing actions or procedures under the Plan for rescue efforts, medical efforts, emergency shelters, provision of supplies, and all other response efforts recommended by the State Office of Emergency Services and the Federal Emergency Management Agency (FEMA). Include procedures for dealing with specific events such as earthquake, major rail and roadway accidents, flooding, and hazardous materials.

Noise Element

Goal 1: Use noise control measures to reduce the impact from transportation noise sources.

Policy 1.1: Pursue construction of new barriers, or the augmentation of existing barriers, to reduce noise impacts along the Route 5 and Route 55 freeways along segments directly next to residential areas.

Policy 1.11: Consider noise impacts to residential neighborhoods when designating truck routes and major circulation corridors.

Goal 2: Incorporate noise considerations into land use planning decisions.

Policy 2.1: Adopt planning guidelines that establish acceptable noise standards for various land uses throughout the Tustin Planning Area.

Policy 2.3: Use noise/land use compatibility standards as a guide for future planning and development.

Policy 2.4: Review proposed projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise.

Policy 2.5: Require new residential developments located in proximity to existing commercial/industrial operations to control residential interior noise levels as a condition of approval.

Policy 2.6: Require that commercial uses developed as part of a mixed-use project (with residential) not be noise intensive. Design mixed-use structures to prevent transfer of noise from the commercial to the residential use.

Policy 2.7: Require new commercial/industrial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into project design.

Goal 3: Develop measures to control non-transportation noise impacts.

Policy 3.1: Implement a review process of Tustin's noise ordinance, and City policies and regulations affecting noise.

Policy 3.2: Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.

Policy 3.3: Require City departments to observe state and federal occupational safety and health noise standards.

Growth Management Element

Goal 2: Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.

Policy 2.1: Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.

Policy 2.5: All new development shall be required to establish a development phasing program which phases approval of development commensurate with required improvements to roadway capacity. The Phasing Plan shall include an overall buildout development plan which can demonstrate the ability of the infrastructure to support the planned development.

Policy 2.6: Development phasing for new projects shall be a component of the development review and entitlement process and shall be approved prior to issuance of building or grading permits.

Tustin City Code (Tustin Municipal Code)

Chapter 2, Zoning

Chapter 2, Zoning, of the City's Municipal Code regulates the location and uses of specific uses within the city, including residences, businesses, trades, industries, use of buildings, structures, and land, the location, height, bulk, and size of buildings and structures. The zoning standards are implemented to:

- Encourage the most appropriate use of land.
- Conserve and stabilize property value.

- Provide adequate open spaces for light and air and to prevent and fight fires.
- Prevent the undue concentration of population.
- Lessen congestion on streets and highways.
- Promote the health, safety, and the general welfare of the people, all as part of the GP of the City.

Part 5, Combining and Overlay Districts: Tustin City Code Article 9 (Land Use), Chapter 2 (Zoning), Part 5, *Combining and Overlay Districts,* establishes multiple "overlay" designations for the City that are applied over base zones. These designations are to be used along with underlying land-use designations established in City zoning map. Overlay districts signify that an area or site has been identified to have distinct characteristics, requiring special development standards, or allowing certain provisions beyond those for the underlying zoning designation.

5.4.3 ENVIRONMENTAL SETTING

Enderle Center

Enderle Center (the Project site) consists of approximately 11.62 acres of land that includes the following parcels: Assessor Parcel Numbers (APNs) 401-251-04, -05, and -06; 401-252-05, -06, -08, -09, and -10; and 401-253-03 and -04. The Enderle Center is currently developed with 87,136 square feet (SF) of commercial business, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas.

Existing General Plan Land Use and Zoning Designations

The Project site has a GP land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM), as shown on Figure 2-4, *Existing General Plan Land Use*, and Figure 2-5, *Existing Zoning*, in Chapter 3.0 *Project Description*. The PCCB land use designation provides opportunities for a variety of miscellaneous retail, professional office, and service-oriented business activities. The PC COM zoning is intended to allow diversification of the relationships of various buildings, structures and open spaces in planned building groups while ensuring substantial compliance with the district regulations and other provisions of the Planned Community District zone.

Surrounding Land Uses

The proposed Rezone Project is located within an urban area that is fully developed area. The surrounding land uses and their designations are described Table 3-1, *Surrounding Existing Land Use and Zoning Designations*, in Chapter 3.0, *Project Description*. The Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by the 55 freeway, including properties west of Yorba Street. The land uses immediately adjacent to the Specific Plan area include the following:

North: 17th Street bounds the site to the north, followed by commercial, residential and office uses.

East: Enderle Center Drive borders the site to the east and includes office uses.

South: Vandenberg Lane bounds the site to the south followed by residential uses.

West: Tustin City limits and SR-55 freeway, followed by restaurants and office uses in the City of Santa Ana.

5.4.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

LU-1 Physically divide an established community.

LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Initial Study (Appendix A) established that the proposed Project would not result in impacts related to Threshold LU-1; therefore, no further assessment of this threshold is required in this Draft EIR.

5.4.5 METHODOLOGY

The analysis of land use consistency impacts considers whether the proposed Project be inconsistent with (or conflict with) with regional and local plans, policies, and regulations that are applicable to the proposed rezone and Project site, including the SCAG RTP/SCS (Connect SoCal), City of Tustin GP, and zoning code. Consistent with the scope and purpose of this EIR, this discussion primarily focuses on those goals and policies that relate to avoiding or mitigating environmental impacts, and an assessment of whether any inconsistency with these standards creates a significant physical impact on the environment. Thus, a project's inconsistency with a policy is only considered significant if such inconsistency would cause significant physical environmental impacts (as defined by CEQA Guidelines Section 15382).

CEQA Guidelines Section 15125(d) requires that an EIR discuss inconsistencies with applicable plans that the decision-makers should address. A project need not be consistent with each and every policy and objective in a planning document. Rather, a project is considered consistent with the provisions of the identified regional and local plans if it meets the general intent of the plans and would not preclude the attainment of the primary goals of the land use plan or policy.

5.4.6 ENVIRONMENTAL IMPACTS

IMPACT LU-2: THE PROJECT WOULD NOT CAUSE A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO A CONFLICT WITH ANY LAND USE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT.

Less than Significant.

SCAG Connect SoCal Regional Transportation Plan/ Sustainable Communities Strategy Policies

SCAG strategies focus largely on implementing transit-oriented development and increasing the use of regional transit, encouraging development patterns and densities that reduce infrastructure costs, and providing affordable and a variety of housing types. The proposed GPA required for the Project would implement SCAG strategies related to high-density, infill development, and improvement of the job/housing balance that is centered around public transit opportunities. The Project provides for infill development in an already developed urban area that would make use of the existing circulation and utility infrastructure. The Project would allow for development of high-density residential uses and commercial uses that would create a mixed-use environment in which residents would benefit from the proposed onsite uses and nearby shopping, restaurant, and employment opportunities. Mixed-use development generally results in lower vehicle miles traveled (VMT) due to the proximity of residential and nonresidential uses.

Table 5.4-1: Project Consistency with 2020 SCAG Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy Policies

RTP/SCS Goal, Policy, or Objective	Proposed Project Consistency with Policy
Focus Growth Near Destinations & Mobility Options	
Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations.	**Consistent.** The proposed Project includes a General Plan Amendment (GPA) to allow for a high intensity mixed-use development near multiple freeways, existing commercial uses and the OCTA transit system.
Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets.	**Consistent.** The proposed Project would provide additional housing and commercial uses in a regional job centered area and is located near transit and main streets and would improve the City's jobs/housing balance.
Plan for growth near transit investments and support implementation of first/last mile strategies.	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site (see Section 5.9, *Transportation*).
Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses.	**Consistent.** The proposed Project would develop an existing commercial center with large areas of surface parking and intensify the existing site by allowing for the future development of residential uses. The Project also considers future development of new nonresidential uses (previously entitled) that would be developed consistent with market demands and conditions.
Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods.	**Consistent.** The proposed Project is an infill use that would allow for future development of an existing commercial center to accommodate anticipated residential growth, and would provide connectivity to surrounding neighborhoods.
Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed-uses or locating and orienting close to existing destinations).	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site (see Section 5.9, *Transportation*).
Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking).	**Consistent.** The proposed ODS for the Project site would include parking requirements and would provide flexibility in implementing the various parking requirements for residential and nonresidential uses. Future parking would likely include a combination of surface and structure parking, which would be further regulated through compliance with ODS created for the Project site.
Promote Diverse Housing Choices	
Preserve and rehabilitate affordable housing and prevent displacement.	**Consistent.** The Project site does not currently include any housing. No housing would be displaced with the proposed Project. The proposed Project provides for new housing in proximity to existing retail and commercial services. The Project is prompted by the City's HEU, which is meant to facilitate future development of a variety of housing types, including affordable housing.
Identify funding opportunities for new workforce and affordable housing development.	**Not applicable.** The Project proposes an overlay zone to the site and does not propose any actual development or funding of future development. The Project would not prevent SCAG from meeting this goal.
Create incentives and reduce regulatory barriers for building context-sensitive	**Consistent.** The proposed Project would provide a housing overlay district to the Project site to increase housing supply. Implementation of the Housing Overlay and ODS would help streamline development

RTP/SCS Goal, Policy, or Objective	Proposed Project Consistency with Policy
accessory dwelling units to increase housing supply.	proposals and reduce regulatory barriers. The proposed Project would not conflict with policies related to accessory dwelling units.
Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions.	**Consistent.** The proposed Project provides for an increase in dwelling units to increase housing supply. Implementation of the Housing Overlay and ODS would help streamline development proposals and reduce regulatory barriers. The proposed Project provides for a substantial increase in housing units in proximity to transit, pedestrian circulation, and bicycle facilities to provide for multimodal transportation opportunities and reduce vehicle miles traveled to support a reduction in GHG emissions.
Leverage Technology Innovations	
Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space.	**Not applicable.** The Project proposes a housing overlay and does not propose any actual development or funding of future development. However, the California Building Code would be applicable to all future projects, which includes requirement for EV charging and other low emission technologies. The Project would not prevent SCAG from meeting this goal.
Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments.	**Not applicable.** Issues related to technological improvements are addressed on a citywide and regional basis. The Project would not prevent SCAG from meeting this goal.
Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation.	**Not applicable.** Issues related to "micro-power grids" would be addressed on a citywide and regional basis. All future development proposed as part of the Project would comply with CALGreen/Title 24 requirements. The Project would not prevent SCAG from meeting this goal.
Support Implementation of Sustainability Policies	
Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions.	**Not applicable.** The Project proposes a housing overlay and does not propose a specific development project or funding of future development. The Project would not prevent SCAG from meeting this goal.
Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations.	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site (see Section 5.9, *Transportation*).
Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space.	**Not applicable.** The Project proposes a housing overlay and does not propose any actual development or funding of future development. The Project would not prevent SCAG from meeting this goal.
Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies.	**Not applicable.** The Project proposes a housing overlay and does not propose any actual development or funding of future development. The Project would not prevent SCAG from meeting this goal.

RTP/SCS Goal, Policy, or Objective	Proposed Project Consistency with Policy
Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region.	**Consistent.** The Project is being proposed pursuant to the certified HEU, which was prepared to accommodate the City's Regional Housing Needs Allocation, as delegated by SCAG. The City will continue to partner with SCAG and other planning organizations in fulfillment with City and regional goals.
Continue to support long range planning efforts by local jurisdictions.	**Consistent.** The Project is being proposed pursuant to the certified HEU, which was prepared to accommodate the City's Regional Housing Needs Allocation, as delegated by SCAG. The City will continue to partner with SCAG and other planning organizations in fulfillment with City and regional goals.
Provide educational opportunities to local decisions makers and staff on new tools, best practices, and policies related to implementing the Sustainable Communities Strategy.	**Not applicable.** The Project proposes a housing overlay in fulfillment of the HEU and does not include oversight or education by SCAG. The Project would not prevent SCAG from meeting this goal.
Promote a Green Region	
Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards.	**Consistent.** The Project is proposed pursuant to the City's HEU. The HEU Goal 5 states "Ensure that new housing is sensitive to the existing natural and built environment." Several policies are included to support this goal, including requirements for sustainable development and energy conservation. All future projects proposed within the Project site would be required to comply with the City's goals, policies, and programs. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration.	**Consistent.** The proposed Project is a land use planning project that includes ODS. All future development would be required to comply with the City's ODS for the site and are required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24). Implementation of CBC standards and consistency with ODS would be verified by the City during the plan check and permitting process for future development within the Project site., as ensured during the City's plan check.
Integrate local food production into the regional landscape.	**Not applicable.** This measure is a regional policy and is not applicable to urban infill development, such as that proposed by the housing overlay Project.
Promote more resource efficient development focused on conservation, recycling, and reclamation.	**Consistent.** The proposed Project is a land use planning project that includes ODS. All future development would be required to comply with the City's ODS for the site and required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24). Implementation of CBC standards and consistency with ODS would be verified by the City during the plan check and permitting process for future development within the Project site., as ensured during the City's plan check.
Preserve, enhance, and restore regional wildlife connectivity.	**Not applicable.** The Project site and surrounding areas are completely developed and do not contain biological habitats for which wildlife connectivity would be an issue.
Reduce consumption of resource areas, including agricultural land.	**Not applicable.** This measure is a regional policy and not related to an urban transit-oriented environment. The Project site does not contain any resource areas, including agricultural land.
Identify ways to improve access to public park space.	**Consistent.** The Project proposes a housing overlay and does not propose any actual development or funding of future development. However, as described in Section 5. 8, *Recreation*, future development under the Project would be required to provide for adequate

RTP/SCS Goal, Policy, or Objective	Proposed Project Consistency with Policy
	recreational spaces or pay in lieu fees consistent with the City's park space requirements (PPP R-1).

Source: Southern California Association of Governments (SCAG) 2020 Connect SoCal Regional Transportation Plan/ Sustainable Communities Strategy

As defined under Code Regs. tit. 14 § 15126.2 "the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published". The Notice of Preparation, included as Appendix A to this EIR, was circulated for public review on February 16, 2024, and set the environmental baseline for the proposed Project. As described previously, SCAG is required by federal and state law to prepare and update the RTP/SCS every four years. Connect SoCal, the 2024-2050 RTP/SCS, was approved on April 4, 2024. Although the 2024 RTP/SCS was approved after the environmental baseline was set for the Project, Table 5.4-2 below lists applicable strategic policies included in the updated RTP/SCS which the proposed Project would be consistent with. As described above and in Table 5.4-1, the proposed GPA required for the Project would implement SCAG strategies related to high-density, infill development, and improvement of the job/housing balance that is centered around public transit opportunities consistent with Connect SoCal Policies.

Table 5.4-2: Project Consistency with 2024 SCAG Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy Policies

2024 Connect SoCal Strategy Policy	Proposed Project Consistency with Policy
Complete Streets	
Support implementation of Complete Streets demonstrations (including those addressing curb space management) to accommodate and optimize new technologies and micromobility devices, first/last mile connections to transit and last-mile deliveries	**Consistent.** The Project does not currently propose any development or roadway improvements. Roadway improvements would be determined at the time a development project is proposed, and would coordinate with applicable regional, state, and federal transportation parties as necessary. Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2).
Support community-led Complete Streets plans and projects, including those that take into account how to mitigate or adapt to climate change impacts (e.g., extreme heat)	**Not applicable.** This is not a project-specific goal and is therefore not applicable.
Transit and Multimodal Integration	
Increase multimodal connectivity (e.g., first/last mile transit and airport connections), which includes planning for and developing mobility hubs throughout the SCAG region	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The Project site is located near commercial, retail, and office uses. Additionally, as described in Section 5.9, *Transportation*, the proposed Project is located near established public transit and would promote an active lifestyle.
Through land use planning, support residential development along high-frequency transit corridors and around transit/rail facilities and centers	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The Project site is located near commercial, retail, and office uses. Additionally, as described in Section 5.9, *Transportation*, the proposed Project is located near established public transit and would promote an active lifestyle.
Expand the region's networks of bicycle and pedestrian facilities. This includes creating more low stress facilities, such as	**Consistent.** The Project does not currently propose any development or roadway improvements. Roadway improvements would be determined at the time a development project is proposed, and would coordinate with applicable regional, state, and federal transportation parties as

2024 Connect SoCal Strategy Policy	Proposed Project Consistency with Policy
separated bikeways and bike paths, slow streets, and open streets	necessary. Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2).
Safety	
Work with local, state and federal partners to advance safer roadways, including reduced speeds to achieve zero deaths and reduce GHGs	**Not applicable.** This is not a project-specific goal and is therefore not applicable.
Priority Development Areas	
Support the development of housing in areas with existing and planned infrastructure and availability of multimodal options, and where a critical mass of activity can promote location efficiency	**Consistent.** The Regional Housing Needs Assessment (RHNA) is mandated by State Housing Law as part of the periodic process of updating local housing elements of the General Plan. On November 7, 2019, SCAG's Regional Council voted to approve the Draft RHNA Methodology. The approved draft methodology allocated RHNA "fair share" to various jurisdictions based on several variables, including access to job and transit (Southern California Association of Governments, 2020). At the regional level, SCAG planned for future housing growth with a concentration in areas that have existing and planned infrastructure and availability of multimodal options through their "fair share" allocations. The Enderle Center Rezone Project is proposed to make the GP consistent with the certified 2021-2029 Housing Element, which was prepared to accommodate the City's 6th Cycle RHNA allocation. Therefore, the Project supports SCAG's regional efforts to develop housing in existing and planned infrastructure and availability of multimodal options through implementation of their State Housing Law responsibilities.
Housing the Region	
Provide technical assistance for jurisdictions to complete and implement their housing elements and support local governments and Tribal Entities to advance housing production	**Consistent.** The Project is being proposed pursuant to the certified HEU, which was prepared to accommodate the City's Regional Housing Needs Allocation, as delegated by SCAG. The City will continue to partner with SCAG and other planning organizations in fulfillment with City and regional goals.
Identify and pursue partnerships at the local, regional, state and federal levels to align utility, transit and infrastructure investments with housing development and equitable outcomes across the region	**Not applicable.** This is not a project-specific goal and is therefore not applicable.
Sustainable Development	
Research the availability of resources that can support the development of water and energy-efficient building practices, including green infrastructure	**Consistent.** The Project is proposed pursuant to the City's HEU. The HEU Goal 5 states "Ensure that new housing is sensitive to the existing natural and built environment." Several policies are included to support this goal, including requirements for sustainable development and energy conservation. All future projects proposed within the Project site would be required to comply with the City's goals, policies, and programs. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Air Quality	
Coordinate with local, regional, state and federal partners to meet federal and	**Consistent.** As described in Section 5.1, *Air Quality*, particulate emissions would mostly be derived from mobile source emissions. Future development would produce minimal mobile source emissions and would

2024 Connect SoCal Strategy Policy	Proposed Project Consistency with Policy
state ambient air-quality standards and improve public health	also be required to comply with all relevant State, regional, and local regulations and policies for reducing particulate emissions. However, net new emissions associated with the future development of the proposed Project would exceed the SCAQMD LSTs for PM_{10} during operational activities. The majority of the PM_{10} emissions are associated with mobile sources from project-related vehicle trips. Although future development details are unknown, implementation of Mitigation Measure AQ-1 would require a project-specific assessment of potential localized impacts for future projects and if future projects exceed the applicable LST thresholds, a dispersion modeling analysis would be necessary to calculate health risk from project implementation. In addition, the Project would be required to comply with SCAQMD standard conditions, including Rule 403 (Fugitive Dust) to control fugitive dust and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Furthermore, any necessary mitigation would be imposed at the project level once such future projects are proposed. However, the Project is conservatively assumed to result in a significant and unavoidable health risk impact.
Clean Transportation	
Support the deployment of clean transit and technologies to reduce greenhouse gas emissions as part of the CARB innovative clean technology (ICT) rule	**Consistent.** The CARB innovative clean technology (ICT) rule requires all public transit agencies to gradually reduce fleet vehicle tailpipe emissions and encourages them to provide innovative first and last-mile connectivity and improved mobility for transit riders. As described in Section 5.9, *Transportation*, the proposed Project is located near established public transit and would promote an active lifestyle. The Project site is served by OCTA. There are two bus stops within one mile of the Project site. The nearest OCTA bus stop is located near the Yorba Street/Enderle Center Drive and 17th Street intersection, nearly adjacent to the Project site. Additionally, the Metrolink Inland Empire-Orange County Line has a stop 1.7 miles east of the Project of the Project site, at the Santa Ana Metrolink Station. future projects would be required, if deemed necessary, to fund transit facilities as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Natural and Agricultural Lands Preservation	
Work with implementation agencies to support, establish or supplement voluntary regional advance mitigation programs (RAMP) for regionally significant transportation projects to mitigate environmental impacts, reduce per-capita VMT and provide mitigation opportunities through the Intergovernmental Review Process	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site. Additionally, the Project would result in a less than significant impact on VMT (see Section 5.9, *Transportation*).
Continue efforts to support partners in identifying priority conservation areas—including habitat, wildlife corridors, and natural and agricultural lands—for permanent protection	**Consistent.** The Project site is completely developed and void of natural topographical features, natural resources and soils. Design requirements established through ODS for the site would be created to ensure that future projects are compatible with the surrounding environment and development by including appropriate landscaping.
Support the integration of nature-based solutions into implementing agency plans to address urban heat, organic waste reduction, protection of wetlands, habitat	**Consistent.** The Project site and surrounding areas are completely developed and do not contain biological habitats for which wildlife connectivity would be an issue. Additionally, each future residential

2024 Connect SoCal Strategy Policy	Proposed Project Consistency with Policy
and wildlife corridor restoration, greenway connectivity and similar efforts	project implemented as part of the housing overlay and Housing Element would require a project-level plan check.
Climate Resilience	
Develop partnerships and programs to support local and regional climate adaptation, mitigation and resilience initiatives	**Not applicable.** This is not a project-specific goal and is therefore not applicable.
Collaborate with partners to foster adoption of systems and technologies that can reduce water demand and/or increase water supply, such as alternative groundwater recharge technologies, stormwater capture systems, urban cooling infrastructure and greywater usage systems	**Consistent.** Future projects would be required to implement landscaping and water conserving appliances pursuant to Section 9701 of Article 9, Chapter 7 of the City of Tustin Municipal Code. Compliance would be reviewed by the city during the permitting process. Additionally, development and construction of the Project site would require preparation and adherence to SWPPP and WQMP. Therefore, development of the site would not deplete or pollute groundwater resources. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Workforce Development	
Provide technical assistance to help local jurisdictions realize their economic and workforce-development goals	**Not applicable.** This is not a project-specific goal and is therefore not applicable.
Encourage the growth of, and equitable access to, living-wage jobs throughout the region	**Consistent.** The Project anticipates the future nonresidential capacity buildout of 118,474 SF within a portion of the Project site that allows non-residential development. As described in Section 5.6, Population and Housing, using employment generation rates from the 2001 SCAG Employment Density Report, buildout of the 118,474 SF of nonresidential space would result in approximately 365 employees (1 employee per 325 SF).

Source: Southern California Association of Governments (SCAG) 2024 Connect SoCal Regional Transportation Plan/ Sustainable Communities Strategy

General Plan and Zoning Code

General Plan Land Use Designation. The Project site currently has a GP Land Use designation of Planned Community Commercial/Business (PCCB). The GP Land Use Element states that the PCCB land use designation provides opportunities for a mixture of all those activities permitted within the Community Commercial, Professional Office, and Industrial land use designations. The PCCB designation may also permit other uses (such as residential uses) which support this land use designation. The standard intensity of development is a floor area ratio of 0.4:1 and the maximum intensity of development is a floor area ratio of 1.5:1. The overall population density range for residential use within the PCCB designation is 2 to 54 persons per acre.

During the Housing Element process, the City identified the Enderle Center as a suitable commercial site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. The City's certified 2021-2029 Housing Element identified the Enderle Center as having capacity for 413 housing units. The proposed Project would implement the City's land use designation for the Project site by proposing a new overlay zone ("overlay district"). This would be accomplished with a Housing Overlay (HO). To accommodate this, a General Plan Amendment (GPA) is needed to establish that higher density residential uses are allowed in the Planned Community Commercial Business (PCCB) land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP); a Zoning Code Amendment (ZCA) to establish the Housing Overlay District (overlay zone) in conjunction with the Planned Community Commercial Districts (base zone); and a Zone Change (ZC) that amends the City's zoning map to apply a Housing Overlay ("HO") District to the Project site. Upon approval of the HO, the Project site could accommodate 413 units over approximately 7 acres

of developable land within the existing 11.8-acre shopping center. This would result in a density of 59 du/ac. The anticipated development density was determined through the Housing Element process and is a conservative estimate based on development trends in nearby communities. Therefore, with approval of the GPA, the Project would bring the Land Use Element of the City General Plan into consistency with the HEU. Additionally, the anticipated development does not rely on the demolition of any existing building, but rather focuses on areas used for surface parking. The proposed Project would still be consistent with the current zoning designation for the site while allowing for the development of housing as well. Thus, the proposed Project would implement, and would not conflict with, the GP land use designation or the current zoning designation for the site.

Land Use Consistency. As shown on Figure 3-4, *Existing General Plan Land Use,* and in Table 3-1, *Surrounding Existing Land Use and Zoning Designations*, in Section 3.0, *Project Description*, the area located directly east of the Project site, and northeast, is also designated as PCCB. The land uses north of the Project site located across 17th Street are designated Community Commercial (CC) and the land uses south of the Project site are designated Planned Community residential (PCR). The areas surrounding the Project site are developed with residential, service, office, and commercial uses. Development of the site for mixed-use development would integrate into the adjacent areas. The proposed Project would provide housing proximate to local employment centers, commercial retail services and restaurants for onsite residents and employees working nearby. No specific development is proposed as part of the Project; however, all future residential development proposed within the Project site would be subject to the requirement and provisions of the applicable Objective Design Standards (ODS). Design requirements established through ODS for the site would be created to ensure compatibility with the existing development as well as surrounding land uses. All future development would be required to comply with the City's ODS for the site.

Overall, the proposed Project would not result in a land use inconsistency. The proposed Project would allow for a mix of uses, including residential, and would provide locational efficiency as it allows people to work, live, and obtain services within a small area, which has the potential to reduce VMT in comparison to residential development that is farther from employment and services. As described throughout this EIR, with implementation of existing regulations, the proposed Project would not result in significant environmental impacts such as light, noise, or air quality to the adjacent existing and planned land uses. Therefore, impacts related to land use inconsistency would be less than significant.

GP Goals, Policies, and Objectives: The provision of residential development within the Project site was not previously analyzed under existing land use plans. A detailed analysis of the proposed Project's consistency with the applicable goals, policies, and objectives of the City's GP that serve to avoid or mitigate environmental impacts is provided in Table 5.4-3 below. As described, the proposed Project would be consistent with the relevant goals, policies, and objectives of the City's GP that avoid or mitigate environmental impacts, and impacts related to conflict with a GP policy related to an environmental effect would be less than significant.

Table 5.4-3: Project Consistency with Relevant General Plan Goals, Policies, and Objectives

General Plan Update Goal, Policy, or Objective	Project Consistency
Land Use Element	
Goal 1: Provide for a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City services.	**Consistent.** The proposed Project would introduce residential land uses to an existing commercial site. During the Housing Element process, the City identified the Enderle Center as a suitable commercial site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. Additionally, the Project site is

General Plan Update Goal, Policy, or Objective	Project Consistency
	envisioned to function as a mixed-use site. A portion of the Project site would remain as nonresidential land use, providing a well-balance mix of residential and commercial land uses. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.1: Preserve the low-density quality of Tustin's existing single-family neighborhoods while permitting compatible multi-family development to meet regional housing needs where best suited from the standpoint of current development, accessibility, transportation and public facilities.	**Consistent.** Development of the proposed Project would allow higher density housing to be constructed on the Project site. The anticipated development would occur over 7 acres of underutilized asphalt parking lot areas adjacent to commercial, residential, and office uses as well as SR 55. Thus, the proposed Project would be consistent with Policy 1.1.
Policy 1.2: Provide for and encourage the development of neighborhood-serving commercial uses in areas of Tustin presently underserved by such uses. Encourage the integration of retail or service commercial uses on the street level of office projects.	**Consistent.** The proposed Project would implement a mix of uses, including commercial and residential, and would provide locational efficiency as it allows people to work, live, and obtain services within a small area in comparison to residential development that is farther from employment and services. The Project anticipates the future additional nonresidential buildout of 118,474 SF, or a total nonresidential development capacity of 205,610 SF for the Project site. Thus, the proposed Project would be consistent with Policy 1.2.
Policy 1.6: Ensure an adequate supply of commercial and industrial land within the City of Tustin for potential commercial and industrial expansion and development.	**Consistent.** The proposed Project anticipates the future nonresidential capacity buildout of 118,474 SF, or a total nonresidential development capacity of 205,610 SF for the Project site. Based on market demand and conditions, future development of commercial uses would be constructed once a project is proposed. Thus, the proposed Project would be consistent with Policy 1.6.
Policy 1.7: As part of the City's attraction to business and industry, provide adequate sites to house future employees.	**Consistent.** The proposed Project would implement a mix of uses, including commercial and residential, and would provide locational efficiency as it allows people to work, live, and obtain services within a small area in comparison to residential development that is farther from employment and services. Thus, the proposed Project would be consistent with Policy 1.7.
Policy 1.10: Ensure that the distribution and intensity of land uses are consistent with the Land Use Plan and classification system.	**Consistent.** The proposed Project would include a GPA and rezone of the Project site with a Housing Overlay District to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. Future residential development would be within the boundaries of the existing Project site and would be subject to ODS. Thus, the proposed Project would be consistent with Policy 1.10.
Policy 1.11: Where feasible, increase the amount and network of public and private open space and recreational facilities which will be adequate in size and location to be useable for active or passive recreation as well as for visual relief.	**Consistent.** As described in Section 5.8, *Recreation*, future implementation of development projects would be required to determine their fair share of park facilities and either provide adequate park facilities or pay in lieu fees in accordance with Tustin City Code Section 9331 (PPP R-1). Thus, the proposed Project would be consistent with Policy 1.11.
Goal 2: Ensure that future land use decisions are the result of sound and comprehensive planning	**Consistent.** The proposed Project would provide new residential development to an existing commercial land use that would be compatible with the adjacent

General Plan Update Goal, Policy, or Objective	Project Consistency
	residential, commercial, and office land uses. Thus, the proposed Project is consistent with Goal 2.
Policy 2.1: Consider all General Plan goals and policies, including those in other General Plan elements, in evaluating proposed development projects for General Plan consistency.	**Consistent.** This Table (Table 5.4-3) analyzes the proposed Project's consistency with all GP element goals and policies and finds no conflict. Thus, the proposed Project is consistent with Policy 2.1.
Goal 3: Ensure that new development is compatible with surrounding land uses in the community, the City's circulation network, availability of public facilities, existing development constraints and the City's unique characteristics and resources	**Consistent.** The proposed Project would provide new residential development to an existing commercial land use adjacent to existing residential, commercial, and office land uses that would be compatible. As described in section *5.7, Public Services*, the proposed Project would not result in public facility and service deficiencies. Additionally, as described in the IS/NOP (Appendix A) the proposed Project would be consistent with the City's unique visual character. As described in Section *5.9, Transportation*, the proposed Project would not conflict with the circulation network. Thus, the proposed Project is consistent with Goal 3.
Policy 3.7: Encourage the preservation and enhancement of public vistas, particularly those seen from public places.	**Consistent.** As described in the IS/NOP (Appendix A), future residential development would be within the boundaries of the existing Enderle Center site and would not impede any existing views of Peters Canyon Ridgeline from 17th Street. The provision for residential development in an area formerly designated for nonresidential land uses would not further diminish the view of a scenic vista. Thus, the proposed Project is consistent with Policy 3.7.
Goal 4: Assure a safe, healthy and aesthetically pleasing community for residents and businesses.	**Consistent.** The ODS would ensure high visual character and quality of future residential development proposed within the Project site. Additionally, each future residential project implemented as part of the housing overlay and Housing Element would require a project-level plan check. Thus, the proposed Project would be consistent with Goal 4.
Policy 4.1: Mitigate traffic congestion and unacceptable levels of noise, odors, dust and light and glare which affect residential areas and sensitive receptors.	**Consistent.** An Air Quality Report and Noise Report were completed for the Project. Construction and operational impacts related to odors and dust would be less than significant with implementation of standard best practices required through permits and agency regulations, as discussed in Section *5.1, Air Quality*, of this EIR. Project impacts to light and glare would also be less than significant as determined by the Initial Study (Appendix A). Construction noise impacts would be less than significant as discussed in Section *5.5, Noise*. Therefore, the Project would be consistent with Policy 4.1.
Policy 4.2: Ensure a sensitive transition between commercial or industrial uses and residential uses by means of such techniques as buffering, landscaping and setbacks.	**Consistent.** Structures within the Enderle Center do not currently have a maximum height limit or required setback distances and site designs are evaluated on a project-by-project basis due to the site's designation as PC COM. Design requirements established through ODS for the site would be created to ensure compatibility with the surrounding land uses. The ODS would also ensure high visual character and quality of future residential development proposed within the Project site. All future development would be required to comply with the City's

General Plan Update Goal, Policy, or Objective	Project Consistency
	ODS for the site. Thus, the proposed Project would be consistent with Policy 4.2.
Policy 4.3: Where mixed uses are permitted, ensure compatible integration of adjacent uses to minimize conflicts.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses. Thus, the proposed Project would be consistent with Policy 4.3.
Goal 6: Improve urban design in Tustin to ensure development that is both architecturally and functionally compatible, and to create uniquely identifiable neighborhoods, commercial and business park districts.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. Thus, the proposed Project would be consistent with Goal 6.
Policy 6.2: Encourage and promote high quality design and physical appearance in all development projects.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. The ODS would ensure high visual character and quality of future residential development proposed within the Project site. All future development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 6.2.
Policy 6.4: Preserve and enhance the City's special residential character and "small town" quality by encouraging and maintaining Tustin's low density residential neighborhoods through enforcement of existing land use and property development standards and the harmonious blending of buildings and landscape.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. The ODS would ensure high visual character and quality of future residential development proposed within the Project site. All future development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 6.4.
Policy 6.9: Upgrade the visual quality of edge conditions between industrial and residential uses through street tree planting and on-site landscaping.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. The ODS would ensure high visual character and quality of future residential development proposed within the Project site. All future development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 6.9.
Policy 6.12: Review and revise, as necessary, the City's development standards to improve the quality of new development in the City and to protect the public health and safety.	**Consistent.** The proposed Project would include a GPA and rezone of the Project site with a Housing Overlay District that would allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. Additionally, design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. The ODS would ensure high visual character and quality of future residential

General Plan Update Goal, Policy, or Objective	Project Consistency
	development proposed within the Project site. All future development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 6.12.
Goal 8: Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.	**Consistent.** As described in Section 5.7, *Public Services*, adequate public facilities and services are available to support the proposed Project. Thus, the proposed Project would be consistent with Goal 8. Additionally, as ensured during the City's plan check, future subdivision projects would be required to pay development impact fees (DIFs) as needed.
Policy 8.1: Encourage within economic capabilities, a wide range of accessible public facilities and community services including fire and police protection, flood control and drainage, educational, cultural and recreational opportunities and other governmental and municipal services. Senate Bill (SB) 50, adopted in 1998, prohibits the City from using the inadequacy of school facilities as a basis for denying or conditioning the development of property. SB 50, however, gave school districts new authority to raise school impact mitigation fees. In addition, the voters passed Proposition 1A in November 1998, which provides $9.2 billion dollars in bonds to construct new or expand existing schools. In summary, school districts have the financial means and legal authority to respond to new development	**Consistent.** As described in Section 5.7, *Public Services*, adequate public facilities and services are available to support the proposed Project. Thus, the proposed Project would be consistent with Policy 8.1. Additionally, as ensured during the City's plan check, future subdivision projects would be required to pay DIFs, such as school district fees, as needed.
Policy 8.7: To ensure an orderly extension of essential services and facilities, and preservation of a free-flowing circulation system, continue to require provision of essential facilities and services at the developer's expense where these systems do not exist or are not already part of the City's financed capital improvement program.	**Consistent.** As described in Section 5.7, *Public Services*, adequate public facilities, and services are available to support the proposed Project. At the time development projects are proposed, appropriate impact fees and necessary coordination with agencies and utility providers would occur to ensure essential services and utilities are supplied to future residents and businesses Additionally, a TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. The TIA would be available upon request from the City of Tustin. Future development would be responsible for implementing identified improvements. Thus, the proposed Project would be consistent with Policy 8.7.
Policy 8.8: Maintain and improve, where necessary, the City's infrastructure and facilities.	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.
Goal 9: Continue to provide for a planned community in East Tustin compatible with the land use characteristics of the local area and sensitive to the natural environment.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 9.6: Retain natural landscape to the maximum extent possible, and incorporate planting in new development areas compatible with the character and quality of the natural surrounding environment	**Consistent.** Design requirements established through ODS for the site would be created to ensure that future projects are compatible with the surrounding environment and development by including appropriate landscaping. Thus, the proposed Project would be consistent with Policy 9.6.
Housing Element	
Goal 1: Provision of an adequate supply of housing to meet the need for a variety of housing types and the	**Consistent.** During the Housing Element process, the City identified the Enderle Center as a suitable commercial

General Plan Update Goal, Policy, or Objective	Project Consistency
diverse socio-economic needs of all community residents commensurate with the City's identified housing needs in the RHNA allocation.	site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. The Project would include a GPA and rezone of the Project site with a Housing Overlay District to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.1: Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.	**Consistent.** During the Housing Element process, the City identified the Enderle Center as a suitable commercial site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. The anticipated development would occur over 7 acres of underutilized asphalt parking lot areas adjacent to commercial, residential, and offices use as well as SR 55. Thus, the proposed Project would be consistent with Policy 1.1.
Policy 1.4: Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units, affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.	**Consistent.** The Project would include a GPA and rezone of the Project site with a Housing Overlay District to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. Per Housing Element Program 1.2a, the City will develop ODS to ensure high quality residential development, while simultaneously meeting the City's goal of streamlining residential development to meet its RHNA goals. Thus, the proposed Project would be consistent with Policy 1.4.
Policy 1.5: Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for the construction of higher density housing, affordable housing, and mixed-use development (the vertical and horizontal integration of commercial and residential uses) in proximity to employment opportunities, community facilities and services, and amenities.	**Consistent.** During the Housing Element process, the City identified the Enderle Center as a suitable commercial site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. Development of the proposed Project would allow higher density housing to be constructed on the Project site. The anticipated development would occur over 7 acres of underutilized asphalt parking lot areas adjacent to commercial, residential, and office uses as well as SR 55. Thus, the proposed Project would be consistent with Policy 1.5.
Goal 2: Promote fair housing opportunities for all people regardless of their special characteristics as protected under state and federal fair housing laws.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 2.3: Promote the dispersion and integration of housing for low- and very-low income families throughout the community.	**Consistent.** During the Housing Element process, the City identified The Enderle Center as a suitable site to allow mixed-use development, which introduced the opportunity to allow higher density housing. The Project would include a housing overlay on the Project site to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs. Thus, the proposed Project would be consistent with Policy 2.3.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 2.6: Promote fair housing opportunities by supporting the continuation of policies that require relocation assistance, and/or to provide incentives and assistance for purchase of the units by low- and moderate-income households.	**Not Applicable.** This is not a Project-specific policy and is therefore not applicable.
Goal 5: Ensure that new housing is sensitive to the existing natural and built environment.	**Consistent.** The ODS would ensure high visual character and quality of future residential development proposed within the Project site. Additionally, each future residential project implemented as part of the housing overlay and Housing Element would require a project-level plan check. Thus, the proposed Project would be consistent with Goal 5.
Policy 5.1: Prioritize sustainable housing developments in proximity to services and employment centers thereby enabling the use of public transit, walking or bicycling and promoting an active lifestyle.	**Consistent**. The Project site is located near commercial, retail, and office uses. Additionally, as described in Section 5.9, *Transportation*, the proposed Project is located near established public transit and would promote an active lifestyle. Thus, the proposed Project would be consistent with Policy 5.1.
Policy 5.2: Promote green building practices for more sustainable energy conservation measures in the construction of new housing or rehabilitated units.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24. Thus, the proposed Project would be consistent with Policy 5.2.
Circulation Element	
Goal 1: Preserve the low-density quality of Tustin's existing single-family neighborhoods while permitting compatible multi-family development to meet regional housing needs where best suited from the standpoint of current development, accessibility, transportation and public facilities.	**Consistent.** Development of the proposed Project would allow higher density housing to be constructed on the Project site. The anticipated development would occur over 7 acres of underutilized asphalt parking lot areas adjacent to commercial, residential, and office uses as well as SR 55. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.2: Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.	**Consistent.** Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2). Thus, the proposed Project would be consistent with Policy 1.2.
Policy 1.3: Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.	**Consistent.** The Project does not currently propose any development or roadway improvements. Roadway improvements would be determined at the time a development project is proposed, and would coordinate with applicable regional, state, and federal transportation parties as necessary. Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2). Thus, the proposed Project would be consistent with Policy 1.3.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 1.4: Develop and implement thresholds and performance standards for acceptable levels of service.	**Consistent.** As described in Section *5.7*, *Public Services*, adequate public facilities, and services are available to support the proposed Project. At the time development projects are proposed, appropriate impact fees and necessary coordination with agencies and utility providers would occur to ensure essential services and utilities are supplied to future residents and businesses Additionally, a TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. Future development would be responsible for implementing identified improvements. Thus, the proposed Project would be consistent with Policy 1.4.
Policy 1.10: Require that proposals for major new developments include a future traffic impact analysis which identifies measures to mitigate any identified project impacts.	**Consistent.** A TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. Future development would be responsible for implementing identified improvements. Future major development under the proposed Project would require preparation of a project-specific TIA to identify project-specific impacts. Thus, the proposed Project would be consistent with Policy 1.10.
Policy 1.11: Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.	**Consistent.** The proposed Project includes a GPA to create a Housing Overlay to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site.
Policy 1.13: Minimize effects of transportation noise wherever possible so as to comply with the Noise Element.	**Consistent.** As discussed in Section *5.5*, *Noise*, the Project would result in a less than significant impact regarding traffic noise. Future development under the proposed Project would be required to ensure consistency with the Project's noise analysis, and if inconsistent, would be required to prepare a separate project-specific noise analysis. A Final Acoustical Report would be required to confirm the noise level exposure from stationary sources to off-site sensitive land uses and to identify any specific mitigation measures necessary to achieve an exterior noise level below the City's noise standards. Consistency with the approved Project would be determined during City plan check.
Policy 1.15: Ensure construction of existing roadways to planned widths, as new developments are constructed.	**Consistent.** Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2). Thus, the proposed Project would be consistent with Policy 1.15.
Policy 1.16: Continue to require dedication of right-of-way and construction of required public improvements on streets adjacent to construction projects at the developer's expense.	**Consistent.** Future projects would be required to pay their fair share of public improvements, comply with the circulation system standards, and traffic control standards specified by the City's latest *Standard Plans and Design Standard,* as ensured by the city during plan check and prior to acquiring building permits (PPP T-1

General Plan Update Goal, Policy, or Objective	Project Consistency
	and T-2). Thus, the proposed Project would be consistent with Policy 1.2. Thus, the proposed Project would be consistent with Policy 1.16.
Goal 5: Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.	**Not applicable.** This Project does not include the development of public transit.
Policy 5.2: Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.	**Consistent**. Future projects would be required, if deemed necessary, to fund transit facilities as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Thus, the proposed Project would be consistent with Policy 5.2.
Policy 5.5: Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.	**Consistent.** The proposed Project would allow for a mix of uses, including residential, and would provide locational efficiency as it allows people to work, live, and obtain services within a small area, which has the potential to reduce VMT in comparison to residential development that is farther from employment and services. Thus, the proposed Project would be consistent with Policy 5.5.
Goal 6: Increase the use of non-motorized modes of transportation.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 6.1: Promote the safety of pedestrians and bicyclists by adhering to uniform standards and practices, including designation of bicycle lanes, off-road bicycle trails, proper signage, and adequate sidewalk, bicycle lane, and off-road bicycle trail widths.	**Consistent.** Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2). No specific development is proposed at this time. Thus, the proposed Project would be consistent with Policy 6.1.
Policy 6.2: Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.	**Consistent.** The Project would allow for future infill development. Future development would utilize existing sidewalks and potential future improvements would be made at the time projects are proposed. Thus, the proposed Project would be consistent with Policy 6.2.
Policy 6.8: Support retrofit installation of sidewalks in industrial districts and Planned Community Business Parks as development occurs.	**Not Applicable.** The Project site is within an existing commercially developed area.
Policy 6.14: Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Goal 7: Provide for well-designed and convenient parking facilities.	**Consistent.** Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2). No specific development is proposed at this time. Thus, the proposed Project would be consistent with Goal 7.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 7.1: Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials.	**Consistent.** Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2). No specific development is proposed at this time. Thus, the proposed Project would be consistent with Policy 7.1.
Policy 7.2: Provide sufficient off-street parking for all land uses	**Consistent.** Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2). No specific development is proposed at this time. Thus, the proposed Project would be consistent with Policy 7.2.
Conservation, Open Space, and Recreation Element	
Goal 1: Reduce air pollution through proper land use, transportation and energy use planning.	**Consistent.** As described in section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Additionally, future residential development within the existing commercial center near multiple freeways and the OCTA transit system would reduce VMT by providing housing, retail, restaurants, and services within the Project sit leading to reduced mobile-source emissions and energy demand. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.1: Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.	**Consistent.** The Project site is envisioned to function as a mixed-use site. The Enderle Center is currently developed with 87,136 SF of commercial business uses, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, and 18,426 SF of office use. Upon approval of the Housing Overlay District, the Project site could accommodate 413 units over approximately 7 acres of developable land within the existing 11.8-acre site. The Project anticipates the future additional nonresidential buildout of 118,474 SF, or a total nonresidential development capacity of 205,610 SF for the Project site. Thus, the Project would accommodate anticipated residential growth, and would increase amenities, such as parks, provide connectivity to surrounding neighborhoods, and increase walkability and minimize VMT. The proposed Project would be consistent with Policy 1.3.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 1.4: Develop neighborhood parks near concentrations of residents to encourage pedestrian travel to the recreation facilities.	**Consistent.** As described in Section 5.8, *Recreation*, future implementation of development projects would be required to determine their fair share of park facilities and either provide adequate park facilities or pay in lieu fees in accordance with Tustin City Code Section 9331 (PPP R-1). Thus, the proposed Project would be consistent with Policy 1.4.
Policy 1.6: Cooperate and participate in regional air quality management plans, programs, and enforcement measures.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Goal 2: Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.	**Consistent.** As described in Section 5.9, *Transportation*, the entire Project can be assumed to have a less than significant VMT impact, including both the commercial and residential land uses in both the current and future conditions. Thus, the proposed Project would be consistent with Policy 2.1.
Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.	**Consistent.** As described in Section 5.9, *Transportation*, the entire Project can be assumed to have a less than significant VMT impact, including both the commercial and residential land uses in both the current and future conditions. Additionally, future development of the existing commercial center to accommodate anticipated residential growth would provide connectivity to surrounding neighborhoods, and increase walkability and minimize VMT. Thus, the proposed Project would be consistent with Policy 2.2.
Policy 2.12: Implement land use policy contained in the Land Use Element toward the end of achieving jobs/housing balance goals.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Goal 3: Reduce particulate emissions to the greatest extent feasible.	**Consistent.** As described in Section 5.1, *Air Quality*, particulate emissions would mostly be derived from mobile source emissions. Future development would produce minimal mobile source emissions and would also be required to comply with all relevant State, regional, and local regulations and policies for reducing particulate emissions. Thus, the proposed Project would be consistent with Goal 3.
Policy 3.1: Adopt incentives, regulations, and/or procedures to minimize particulate emissions from paved and unpaved roads, agricultural uses, parking lots, and building construction.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Goal 4: Reduce emissions through reduced energy consumption.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Goal 4.
Policy 4.1: Promote energy conservation in all sectors of the City including residential, commercial, and industrial.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be

General Plan Update Goal, Policy, or Objective	Project Consistency
	required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 4.1.
Goal 5: Protect water quality and conserve water supply.	**Consistent.** As described in the IS/NOP in Section 5.10, *Hydrology and Water Quality* (see Appendix A), construction of future development facilitated by the Project would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. This would require implementation of a SWPPP that is required to identify all potential sources of pollution that are reasonably expected to affect the quality of storm water discharges from the construction site. Additionally, operation of the proposed Project would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. The DAMP requires that new development and significant redevelopment projects develop and implement a water quality management plan (WQMP) that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. WQMPs prepared for future development would be reviewed and approved by the City to ensure it complies with the MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Thus, implementation of a SWPPP and WQMP would protect water quality and water supply. Thus, the proposed Project would be consistent with Goal 5.
Policy 5.2: Protect groundwater resources from depletion and sources of pollution.	**Consistent.** As described in Section 5.11, *Utilities,* the Project site is fully developed and nearly 100 percent impervious aside from some landscaped areas. Therefore, implementation of the proposed Project would not change the amount of impervious surface of interfere with the rate of groundwater recharge compared to existing conditions. Further, as described above, development and construction of the Project site would require preparation and adherence to SWPPP and WQMP. Therefore, development of the site would not deplete or pollute groundwater resources. Thus, the proposed Project would be consistent with Policy 5.2.
Policy 5.3: Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.	**Consistent.** Future projects would be required to implement landscaping and water conserving appliances pursuant to Section 9701 of Article 9, Chapter 7 of the City of Tustin Municipal Code. Compliance would be reviewed by the City during the permitting process. Thus, the proposed Project would be consistent with Policy 5.3.
Policy 5.5: Protect water quality by responsible agency support of enforcement of water quality standards for	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.

General Plan Update Goal, Policy, or Objective	Project Consistency
water imported into the County, and to preserve the quality of water in the groundwater basin and streams.	
Policy 7.1: Inventory unique or significant tree stands, with particular attention given to the cedar stand, eucalyptus groves, and eucalyptus windrows in East Tustin. Develop standards to retain or incorporate the eucalyptus windrows and groves into development plans where feasible. The redwood/sequoia stand has been retained within a park site and integrated into the park design.	**Not Applicable.** The Project site is completely developed. Future development would not result in the removal of tree stands.
Policy 7.2: Conserve important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands through the practice of creative site planning, revegetation, and open space easements/dedications.	**Not Applicable.** The Project site is completely developed. Future development would not result in the disturbance of important plant communities.
Policy 7.4: Require new development to revegetate graded areas.	**Consistent.** All future projects are required to comply with the City of Tustin Grading Manual (1990), which includes requirements for the revegetation of graded areas. Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 7.4.
Goal 8: Conserve and protect significant topographical features, important watershed areas, resources, and soils.	**Not applicable.** The Project site is completely developed and void of natural topographical features, natural resources and soils.
Policy 8.1: Develop standards to preserve the unique variety of land forms indigenous in hillside areas, and ensure that the development process is structured to ensure that grading and siting practice reflects the natural topography.	**Consistent.** The Project site is not located within a hillside area, is already developed with commercial land uses and parking areas and would be subject to design requirements established through ODS. Furthermore, all future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 8.1.
Policy 8.2: Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.	**Consistent.** As described above, development and construction of the Project site would require preparation and adherence to SWPPP and WQMP. Through implementation of BMP's, future development of the site would require proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements during and following construction. Furthermore, all future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 8.2.
Policy 8.3: Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.	**Consistent.** Future development facilitated by the provision of residential land uses within the Project site would be required to comply with the RWQCB NPDES Construction General Permit requirements. Requirements include installation of Best Management Practices (BMPs), which establishes minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a SWPPP is required by

General Plan Update Goal, Policy, or Objective	Project Consistency
	the RWQCB regulations to be developed by a (Qualified SWPPP Developer) QSD. The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures. Thus, the proposed Project would be consistent with Policy 8.3.
Policy 8.5: Review applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas.	**Consistent.** All future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Implementation of CBC standards would be verified by the City during the plan check and permitting process Furthermore, all future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 8.5.
Policy 8.6: Site planning and architectural design shall respond to the natural landform whenever possible to minimize grading and viewshed intrusion.	**Consistent.** The Project site is located in an urban environment and would develop design requirements established through ODS for the site, and future development within the site, which would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. Furthermore, all future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 8.6.
Policy 8.8: Require geotechnical studies for developments that are proposed for steep slopes and where geological instability may be suspected. Where a precise location of the El Modena fault is determined, appropriate building setbacks shall be established per State law.	**Consistent.** The Project site is outside of a 500-foot radius from an active fault and is not subject to a special development permit. The Project site contains existing development, and the provision for additional development would not exacerbate existing risk of earthquake. Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2). Implementation of CBC standards would be verified by the City during the plan check and permitting process for future development within the Project site. Additionally, future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1).

General Plan Update Goal, Policy, or Objective	Project Consistency
	Thus, the proposed Project would be consistent with Policy 8.8.
Policy 8.10: Mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, and sensitive habitats through the environmental review process.	**Consistent.** The Project site is currently completely paved; thus, implementation of the Project would not result in an adverse effect, either directly or through habitat modifications, on any sensitive species. Additionally, the site does not contain wetlands or sensitive habitats. If commencement of vegetation clearing for any future residential development project occurs between February 1 and September 15, Mitigation Measure BIO-1 has been included to require nesting bird surveys. Additionally, according to the IS/NOP Section *5.5, Cultural Resources* (see Appendix A), there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. However, Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. Furthermore, future development would be required to comply with California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98, and the City of Tustin Grading Manual. Thus, the proposed Project would be consistent with Policy 8.10.
Policy 8.16: Site buildings and align roadways to maximize public visual exposure to natural features.	**Consistent.** The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The view of Peters Canyon Ridgeline from the Project site is obstructed by surrounding buildings and trees. The Project site is bordered by 17th Street to the north, which offers limited public views of Peters Canyon Ridgeline to motorists, bicyclists, and pedestrians traveling eastbound. Views to the east from CA-55 are completely obstructed by adjacent developments and the raised embankment. Thus, the proposed Project would be consistent with Policy 8.16.
Goal 10: Reduce solid waste produced within City.	**Consistent.** Section 5.408.1 of the 2019 California Green Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Additionally, operation of the Project would generate waste as well. However, at least 75 percent of the solid waste is required by AB 341 to be recycled. All future development would be required to comply with waste reduction regulations. Therefore, the Project would be consistent with Goal 10.
Policy 10.2: Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.	**Consistent.** Section 5.408.1 of the 2019 California Green Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Additionally, operation of the Project would generate waste as well. However, at least 75 percent of the solid waste is required by AB 341 to be recycled. All future development would be required to comply with waste reduction regulations. Therefore, the Project would be consistent with Policy 10.2

General Plan Update Goal, Policy, or Objective	Project Consistency
Goal 11: Conserve energy resources through use of available energy technology and conservation practices.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Goal 11.
Policy 11.2: Maintain local legislation to establish, update and implement energy performance building code requirements established under State Title 24 Energy Regulations.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 11.2.
Goal 12: Maintain and enhance the City's unique culturally and historically significant building sites or features.	**Consistent**. The Project site is completely developed. The Project site does not include any historically significant buildings. Additionally, there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. Thus, the proposed Project would be consistent with Goal 12.
Policy 12.2: Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.	**Consistent.** A Cultural Records Search was conducted for the Project site by BFSA Environmental Services in 2023 (see Appendix A). According to results of the cultural record search prepared for the Project, the Project site does not contain any historic resources. Additionally, there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. Furthermore, the Project site is not located in an area identified by the GP as "High Paleontological Sensitivity" and the City has very detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential paleontological resources in the very unlikely event that a resource is encountered. Thus, the proposed Project would be consistent with Policy 12.2
Goal 13: Preserve Tustin's archaeological and paleontological resources.	**Consistent.** As described above, the Project site has low potential for archaeological and paleontological resources. Additionally, Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential paleontological resources in the very unlikely event that a resource is encountered during future

General Plan Update Goal, Policy, or Objective	Project Consistency
	construction activities. Thus, the proposed Project would be consistent with Goal 13.
Policy 13.1: Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.	**Consistent.** Future projects within the Project site would require preparation of Geotechnical Investigations. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Additionally, a Cultural Records Search (see Appendix A) was prepared to determine the potential for historic and architectural resources to occur within the Project site. Thus, the proposed Project would be consistent with Policy 13.1.
Policy 13.2: Require mitigation measures where development will affect archaeological or paleontological resources.	**Consistent.** As described above, the Project site has low potential for archeological resources; however, future development would be required to comply with Mitigation Measure CUL-1 and all relevant regulatory requirements. Additionally, the Project site is not located in an area identified by the GP as "High Paleontological Sensitivity." The City has very detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage. All future projects are required to comply with the City of Tustin Grading Manual. Additionally, future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Thus, the proposed Project would be consistent with Policy 13.2.
Goal 14: Encourage the development and maintenance of a balanced system of public and private parks, recreation facilities, and open spaces that serves the needs of existing and future residents in the City of Tustin.	**Consistent.** The Project proposes a housing overlay and does not propose any actual development or funding of future development. However, as described in Section 5. 8, *Recreation*, future development under the Project would provide for adequate recreational spaces or pay in lieu fees consistent with the City's park space requirements (PPP R-1). Thus, the proposed Project would be consistent with Goal 14.
Policy 14.8: Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.	**Consistent.** The Project proposes a land use change and does not propose any actual development or funding of future development. However, as described in Section 5. 8, *Recreation*, future development under the Project would provide for adequate recreational spaces or pay in lieu fees consistent with the City's park space requirements (PPP R-1).
Policy 14.12: Ensure that the City's laws and related implementation tools relating to park dedication and development (e.g., ordinances, regulations, in-lieu fee schedules, etc.) reflect current land and construction costs, and are, in fact, providing adequate park land and facilities concurrent with population growth.	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.
Goal 17: Operate and maintain existing and future parks and recreation facilities so they are safe, clean, and attractive to the public; and preserve, protect, and enhance both existing and potential natural recreation areas to ensure that long-term public investments and	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.

General Plan Update Goal, Policy, or Objective	Project Consistency
values are not unreasonably preempted, compromised, or prevented by neglect or short-term considerations.	
Policy 17.2: Require park designs (including landscape treatments, buildings, irrigation, etc.) that are durable, reasonably standardized, and economical to maintain.	**Consistent.** The ODS would ensure consistency with the City landscaping, building, and irrigation standards. Additionally, each future residential and commercial project implemented as part of the housing overlay would require a project-level plan check. Thus, the proposed Project would be consistent with Policy 17.2.
Goal 18: Ensure that the recreational goals and policies are pursued and realized in an organized, incremental, and cost effective manner and consistent with the City of Tustin's financial resources and legal authorities and the appropriate responsibilities of other agencies, the private sector, and individual and group users.	**Consistent.** Future subdivision projects would be required to pay DIFs, which include fees that would go towards the development and maintenance of the City's recreational resources. Thus, the proposed Project would be consistent with Goal 18.
Policy 18.5: Conserve the City's Quimby Act authority by utilizing, wherever practicable, the City's broad powers to enact and enforce its General Plan, Specific Plan(s), Redevelopment Plan(s), subdivision ordinance and Zoning Ordinance to secure public and private recreation sites, open space, trails, and other related land use objectives of community planning significance	**Consistent.** Future subdivision projects would be required to pay DIFs, which include fees that would go towards the development and maintenance of the City's recreational resources. Thus, the proposed Project would be consistent with Policy 18.5.
Public Safety Element	
Goal 1: Reduce the risk to the community's inhabitants from flood hazards.	**Consistent.** According to the Federal Emergency Management Agency (FEMA) Map 06059C0164J, the Project site is within Flood Zone X, or the 0.2 percent annual change flood area, areas of 1 percent annual chance flood with average depth less than 1 foot or with drainage areas of less than 1 square mile (Federal Emergency Management Agency, 2009). The site is not within a special flood hazard area. The Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.1: Identify flood hazard areas and provide appropriate land use regulations for areas subject to flooding.	**Consistent.** As described above, the Project site is not located within a flood hazard area and would not exacerbate flood conditions. Thus, the proposed Project would be consistent with Policy 1.1.
Policy 1.5: Require detention basins as a flood control measure where applicable to reduce the risk from flood hazards.	**Consistent.** Specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed. However, future development would comply with the DAMP regulations which are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. Compliance would ensure that all future development within the Enderle Center incorporates appropriate Site Design, Source Control, and Treatment Control BMPs. Thus, the proposed Project would be consistent with Policy 1.5.

General Plan Update Goal, Policy, or Objective	Project Consistency
Goal 3: Reduce the risk to the community from geologic and seismic hazards.	**Consistent.** Future projects within the Project site would require preparation of Geotechnical Investigations. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2). Implementation of CBC standards would be verified by the City during the plan check and permitting process for future development within the Project site. Thus, the proposed Project would be consistent with Goal 3.
Policy 3.1: Require review of soil and geologic conditions by a State-Licensed Engineering Geologist to determine stability prior to the approval of development where appropriate.	**Consistent.** Future projects within the Project site would require preparation of Geotechnical Investigations. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2). Implementation of CBC standards would be verified by the City during the plan check and permitting process for future development within the Project site. Thus, the proposed Project would be consistent with Policy 3.1.
Policy 3.5: Ensure that structures for human occupancy, critical structures, and vital emergency facilities are designed to minimize damage from potential geologic/seismic hazards and avoid functional impairment.	**Consistent.** Future projects within the Project site would require preparation of Geotechnical Investigations. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2). Implementation of CBC standards would be verified by the City during the plan check and permitting process for future development within the Project site. Thus, the proposed Project would be consistent with Policy 3.5.
Policy 3.7: Include and periodically review and update emergency procedures for earthquakes in the City's Emergency Preparedness Plan.	**Consistent.** The Project site is not designated as an emergency evacuation route. The Project would not impair the implementation of evacuation protocol in the event of an emergency within the City or Project site. Additionally, each future residential project implemented as part of the housing overlay and Housing Element would require a project-level plan check with the City and would be reviewed by the City's fire department (Orange County Fire Authority) to ensure proper emergency access to and from the site. Thus, the proposed Project would be consistent with Policy 3.7.
Goal 4: Reduce the risk to the community's inhabitants from exposure to hazardous materials and wastes.	**Consistent.** The Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Additionally, all future development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element would be required to develop and implement a SWPPP as required through the NPDES. Implementation of a SWPPP would minimize potential adverse effects to workers, the public, and the

General Plan Update Goal, Policy, or Objective	Project Consistency
	environment from the foreseeable upset and accident conditions involving the release of hazardous materials. Construction contract specifications would include strict on-site handling rules and BMPs for hazardous materials. Thus, the proposed Project would be consistent with Goal 4.
Policy 4.3: Transportation of hazardous waste will be minimized and regulated where possible to avoid environmentally sensitive areas and populated, congested, and dangerous routes.	**Consistent.** Future construction and operational activities could involve the transport, use, and disposal of hazardous materials; however, the types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and State requirements that are implemented by the City during building permitting for construction activities. Thus, the proposed Project would be consistent with Policy 4.3.
Policy 4.5: Establish regulations requiring land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials to be located a safe distance from other land uses that may be adversely affected by such activities.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 4.15: Coordinate with the County of Orange in the implementation of the National Pollution Discharge Elimination System Permits (NPDES) regulations.	**Consistent.** Construction of future projects would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. This would require implementation of a SWPPP that is required to identify all potential sources of pollution that are reasonably expected to affect the quality of storm water discharges from the construction site. Additionally, operation of the proposed Project would be required to comply with the requirements of the DAMP and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. WQMPs prepared for future development would be reviewed and approved by the City to ensure it complies with the MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Thus, the proposed Project would be consistent with Policy 4.15.
Goal 5: Reduce the risk to the community's inhabitants from fires or explosions.	**Consistent.** The Project site is currently developed as a commercial site and is surrounded by other commercial developments. According to the CalFire Fire Hazard Severity Zone Map, the City of Tustin contains very high fire severity zones in the northeast portion of the City. The Project site is not located within or near State responsibility areas or lands classified as very high fire hazard severity zones. All future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a

General Plan Update Goal, Policy, or Objective	Project Consistency
	minimum requirement intended to protect life safety and prevent collapse of structures. Additionally, all future development would be required to comply with the requirements of the California Fire Code (Title 24, Part 9), as ensured by the city during plan check and permitting. Thus, the proposed Project would be consistent with Goal 5.
Policy 5.4: Enforce building code requirements that assure adequate fire protection.	**Consistent.** All future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Additionally, all future development would be required to comply with the requirements of the California Fire Code (Title 24, Part 9), as ensured by the city during plan check and permitting. Thus, the proposed Project would be consistent with Policy 5.4.
Policy 5.6: Cooperate with Orange County Fire Authority to ensure the provision of adequate and cost-effective fire protection services.	**Consistent.** As discussed in Section 5.7, *Public Services,* future subdivision projects would pay appropriate DIFs for the maintenance of adequate public services. Ongoing coordination would be conducted between the City and Orange County Fire Authority (OCFA) regarding growth planning. Thus, the proposed Project would be consistent with Policy 5.6.
Goal 6: Stabilize demand for law enforcement services.	**Consistent.** As discussed in Section 5.7, *Public Services,* future subdivision projects would pay appropriate DIFs for the maintenance of adequate public services. Ongoing coordination would be conducted between the City and Orange County Fire Authority (OCFA) regarding growth planning. Thus, the proposed Project would be consistent with Goal 6.
Policy 6.1: Provide appropriate levels of police protection within the community.	**Consistent.** As discussed in Section 5.7, *Public Services,* future subdivision projects would pay appropriate DIFs for the maintenance of adequate public services. Ongoing coordination would be conducted between the City and Orange County Fire Authority (OCFA) regarding growth planning. Thus, the proposed Project would be consistent with Policy 6.1.
Policy 6.5: Promote the use of defensible space concepts (site and building lighting, visual observation of open spaces, secured areas, etc.) in project design to enhance public safety.	**Consistent.** All future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Additionally, all future development would be required to comply with the requirements of the California Fire Code (Title 24, Part 9), as ensured by the city during plan check and permitting. Additionally, all future development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 6.5.
Goal 8: Improve the City's ability to respond to natural and manmade emergencies.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 8.1: Maintain an up-to-date Emergency Operations Plan identifying all available resources and funds for use in the event of a disaster and establishing implementing actions or procedures under the Plan for rescue efforts, medical efforts, emergency shelters, provision of supplies, and all other response efforts recommended by the State Office of Emergency Services and the Federal Emergency Management Agency (FEMA). Include procedures for dealing with specific events such as earthquake, major rail and roadway accidents, flooding, and hazardous materials	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.
Noise Element	
Goal 1: Use noise control measures to reduce the impact from transportation noise sources.	**Consistent.** As discussed in Section 5.5, *Noise*, the Project would result in a less than significant impact regarding traffic noise. Future development under the proposed Project would be required to ensure consistency with the Project's noise analysis, and if inconsistent, would be required to prepare a separate project-specific noise analysis. A Final Acoustical Report would be required to confirm the noise level exposure from stationary sources to off-site sensitive land uses and to identify any specific mitigation measures necessary to achieve an exterior noise level below the City's noise standards. Consistency with the approved Project would be determined during City plan check. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.1: Pursue construction of new barriers, or the augmentation of existing barriers, to reduce noise impacts along the Route 5 and Route 55 freeways along segments directly next to residential areas.	**Consistent.** The Project site is adjacent to State Route 55. Future residential projects could experience noise pollution from the adjacent freeway. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section 5.5, *Noise*. Thus, the proposed Project would be consistent with Policy 1.1.
Policy 1.11: Consider noise impacts to residential neighborhoods when designating truck routes and major circulation corridors.	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.
Goal 2: Incorporate noise considerations into land use planning decisions.	**Consistent.** The Project site is adjacent to State Route 55. Future residential projects could experience noise pollution from the adjacent freeway. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section 5.5, *Noise*. Thus, the proposed Project would be consistent with Goal 2.
Policy 2.1: Adopt planning guidelines that establish acceptable noise standards for various land uses throughout the Tustin Planning Area.	**Consistent.** Future development under the proposed Project would be required to adhere to acceptable noise standards for the established land uses, as ensured by the City during the plan check and permitting process. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed

General Plan Update Goal, Policy, or Objective	Project Consistency
	in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.1.
Policy 2.3: Use noise/land use compatibility standards as a guide for future planning and development.	**Consistent.** Future development under the proposed Project would be required to adhere to acceptable noise standards for the established land uses, as ensured by the City during the plan check and permitting process. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.3.
Policy 2.4: Review proposed projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise.	**Consistent.** Future development under the proposed Project would be reviewed by the City for compatibility with nearby noise-sensitive land uses, as ensured during the plan check and permitting. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.4.
Policy 2.5: Require new residential developments located in proximity to existing commercial/industrial operations to control residential interior noise levels as a condition of approval.	**Consistent.** Future development under the proposed Project would be required to adhere to acceptable noise standards for the established land uses, as ensured by the City during the plan check and permitting process. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.5.
Policy 2.6: Require that commercial uses developed as part of a mixed-use project (with residential) not be noise intensive. Design mixed-use structures to prevent transfer of noise from the commercial to the residential use.	**Consistent.** The proposed Project includes a mixed-use development for commercial and residential land uses. Future development under the proposed Project would be reviewed by the City for compatibility with nearby noise-sensitive land uses, as ensured during plan check and permitting. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.6.
Policy 2.7: Require new commercial/industrial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into project design.	**Consistent.** The proposed Project includes mixed-use development for commercial and residential land uses. Future commercial development under the proposed Project would be reviewed by the City, as ensured during plan check and permitting, and would incorporate noise mitigation into project design as needed. Thus, the proposed Project would be consistent with Policy 2.7.
Goal 3: Develop measures to control non-transportation noise impacts.	**Consistent.** The Project would allow for the potential future development of residential uses amongst commercial land uses. Residential land uses are not considered noise-intensive uses, and would not contribute to new significant noise increase, as discussed in Section *5.5, Noise*. Therefore, the Project would be consistent with Goal 3.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 3.1: Implement a review process of Tustin's noise ordinance, and City policies and regulations affecting noise.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 3.2: Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.	**Consistent.** Future development under the proposed Project would be reviewed by the City for consistency with the permitted hours of activity, as ensured during plan check and permitting. Thus, the proposed Project would be consistent with Policy 3.2.
Policy 3.3: Require City departments to observe state and federal occupational safety and health noise standards	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.
Growth Management Element	
Goal 2: Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.	**Consistent.** A TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. Future development would be responsible for implementing identified improvements. Future major development under the proposed Project would require preparation of a project-specific TIA to identify project-specific impacts. Thus, the proposed Project would be consistent with Goal 2.
Policy 2.1: Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.	**Consistent.** Future projects would be required to pay their fair share of street improvement costs as identified in the Project TIA (available upon request by the City), including regional traffic mitigation, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Thus, the proposed Project would be consistent with Policy 2.1
Policy 2.5: All new developments shall be required to establish a development phasing program which phases approval of development commensurate with required improvements to roadway capacity. The Phasing Plan shall include an overall buildout development plan which can demonstrate the ability of the infrastructure to support the planned development.	**Consistent.** Future projects would be required to establish a phasing program as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Thus, the proposed Project would be consistent with Policy 2.5.
Policy 2.6: Development phasing for new projects shall be a component of the development review and entitlement process and shall be approved prior to issuance of building or grading permits	**Consistent.** All future projects would be required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 2.6.

Source: City of Tustin General Plan

5.4.7 CUMULATIVE IMPACTS

The cumulative study area for land use and planning includes the neighboring city of Santa Ana. As shown in Table 5-1, *Cumulative Project List*, and Figure 5-1, *Cumulative Projects*, in Section 5.0, *Environmental Impact Analysis*, of this Draft EIR, the vicinity of the Project site includes numerous projects within the City of Santa Ana. A large portion of these projects consist of multi-family residential, commercial, and office developments, which are similar, consistent, and complementary to the proposed Project.

As described previously, the proposed Project would implement the objectives of the previously approved 2021-2029 City Housing Element. Also, as detailed in Tables 5.4-1, 5.4-2, and 5.4-3, the proposed Project

is consistent with all of the relevant SCAG RTP/SCS Policies and the City's GP goals and policies adopted for the purpose of avoiding or mitigating an environmental effect. Furthermore, the proposed Project, which includes a GPA, Zoning Code Amendment, and Zone Change would thus be consistent with the GP and land use designations and focused area development objectives. Because the proposed Project would implement the GP (including the Housing Element) and would not result in conflicts with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed Project, which has the purpose of avoiding or mitigating an environmental effect, the proposed Project would not cumulatively contribute to such an impact that could occur from related projects. Overall, the Project would be cumulatively beneficial to meeting the statewide housing objectives as established through the regional and local RHNA. Project-level impacts would be mitigated to less-than-significant levels through the implementation of mitigation measures which would reduce any potentially reasonably foreseeable significant impacts from the implementation of future development projects. As a result, cumulative impacts related to land use and planning from the proposed Project would not be cumulatively considerable with implementation of mitigation.

5.4.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

The following regulations are identified in the above analysis as existing regulations that would avoid or minimize potential Project impacts.

- AB 341 (recycling)
- California Green Building Standards Code, Section 5.408.1 (Green building standards)
- California Code of Regulations, Title 24 (California building requirements)
- Government Code Section 65962.5 (Hazardous waste disclosure)
- City of Tustin Municipal Code, Section 9701 of Article 9, Chapter 7 (Water efficient landscapes)
- City of Tustin Municipal Code, Section 4902 (DAMP)
- City of Tustin Municipal Code, Article 4, Chapter 6 (City noise control)
- City of Tustin Municipal Code, Chapter 8 (Floodplain management)

Plans, Programs, or Policies

The following plans, programs, and policies are identified in the above analysis as existing regulations that would avoid or minimize potential Project impacts.

PPP GEO-1 **CBC Title 24, Part 2.** Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process.

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and

construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

PPP T-1: **Sidewalk Standards** Sidewalks shall be provided on a private street for attached and detached residential products in accordance with Standard B102 of the City's Construction Standards, Storm Drain and On-Site Private Improvements, and is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban Development's Fair Housing Accessibility Guidelines.

PPP T-2: **Traffic Control/Utilities** All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.4.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, Impact LU-2 would be less than significant.

5.4.10 MITIGATION MEASURES

Refer to all mitigation measures presented in this Draft EIR. In instances where significant impacts are identified as part of the Project's construction and/or operational phases, mitigation measures are provided in the specific topic sections to reduce impacts to less-than-significant levels (or, if it is not possible to reduce the Project's impacts to less-than-significant levels, mitigation is provided to minimize impacts to the maximum level feasible).

5.4.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of mitigation measures presented in this Draft EIR, the proposed Project would be consistent with land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no significant and unavoidable adverse impacts related to land use would occur.

5.4.12 REFERENCES

BFSA Environmental Services. (2023a). *Archaeological Resources Records Search Results for the Enderle Center Project, Tustin*.

California Department of Forestry and Fire Protection. (2022). Fire and Resource Assessment Program. Retrieved from: https://www.fire.ca.gov/what-we-do/fire-resource-assessment-program

City of Tustin. (2018). *General Plan*. Available at: www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF?bidId=

City of Tustin. (2022). *Final Housing Element Update 2021-2029*. Available at: https://www.tustinca.org/1211/Housing-Element-Update

Federal Emergency Management Agency. (2009, December 3). Map Number 06059C0164J. Retrieved from Federal Insurance Rate Map: https://msc.fema.gov/portal/search?AddressQuery=enderle%20center%2C%20tustin%2C%20ca

LSA. (2024). Enderle Center Project Air Quality, Energy, and Greenhouse Gas Report

Southern California Association of Governments. (2020, September). *Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy*. Retrieved from https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176

Southern California Association of Governments. (2024, April). *Connect SoCal 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy*. Retrieved from https://scag.ca.gov/connect-socal

5.5 Noise

5.5.1 INTRODUCTION

This EIR section evaluates the potential noise and vibration impacts that could result from implementation of the proposed Project. It discusses the existing noise environment within and around the Project site, as well as the regulatory framework for regulation of noise. This section analyzes the effect of the proposed Project on the existing ambient noise environment during demolition, construction, and operational activities; and evaluates the proposed Project's noise effects for consistency with relevant local agency noise policies and regulations. The analysis in this section also addresses impacts related to groundborne vibration. Information in this section is based on the:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- Tustin City Code.
- Noise and Vibration Impact Analysis, LSA, March 2024, Appendix C.

Noise and Vibration Terminology

Various noise descriptors are utilized in this EIR analysis, and are summarized as follows:

dB: Decibel, the standard unit of measurement for sound pressure level.

dBA: A-weighted decibel, an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Leq: The equivalent sound level, which is used to describe noise over a specified period of time, typically 1 hour, in terms of a single numerical value. The Leq of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The Leq may also be referred to as the average sound level.

Lmax: The instantaneous maximum noise level experienced during a given period of time.

Lmin: The instantaneous minimum noise level experienced during a given period of time.

Lx: The sound level that is equaled or exceeded "x" percent of a specified time period. The "x" thus represents the percentage of time a noise level is exceeded. For instance, L50 and L90 represents the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

Ldn: Also termed the "day-night" average noise level (DNL), Ldn is a measure of the average of A-weighted sound levels occurring during a 24-hour period, accounting for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: The Community Noise Equivalent Level, which, similar to the Ldn, is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dBA to measured noise levels between the hours of 7:00 p.m. to 10:00 p.m. and after an addition of 10 dBA to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Ambient Noise Level: The background noise level associated with a given environment at a specified time and is usually a composite of sound from many sources from many directions.

Effects of Noise

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance)
- Interference effects (e.g., communication, sleep, and learning interference)
- Physiological effects (e.g., startle response)
- Physical effects (e.g., hearing loss)

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects refer to interruption of daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep. Regarding the subjective effects, the responses of individuals to similar noise events are diverse and are influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be to those hearing it. Regarding increases in A-weighted noise levels, the following relationships generally occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived.
- Outside of the laboratory, a 3-dBA change in noise levels is considered a barely perceivable difference.
- A change in noise levels of 5 dBA is considered a readily perceivable difference.
- A change in noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

Noise Attenuation

Stationary point sources of noise, including mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 dBA per doubling of distance from the source over hard surfaces to 7.5 dBA per doubling of distance from the source over hard surfaces, depending on the topography of the area and environmental conditions (e.g., atmospheric conditions, noise barriers [either vegetative or manufactured]). Thus, a noise measured at 90 dBA 50 feet from the source would attenuate to about 84 dBA at 100 feet, 78 dBA at 200 feet, 72 dBA at 400 feet, and so forth. Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 4 to 6 dBA per doubling of distance from the source.

Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.

Fundamentals of Vibration

Vibration is energy transmitted in waves through the ground or man-made structures. These energy waves generally dissipate with distance from the vibration source. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. VdB serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

5.5.2 REGULATORY SETTING

5.5.2.1 Federal Regulations

There are no federal regulations concerning noise impacts that are applicable to the Project.

5.5.2.2 State Regulations

Caltrans Vibration Guidance Manual

There are no vibration standards that are specifically applicable to the proposed Project, hence, California Department of Transportation's (Caltrans) Transportation and Construction Vibration Guidance Manual guidelines are used as a screening tool for assessing the potential for adverse vibration effects related to human perception, which are listed in Table 5.5-1. It should be noted that the human annoyance threshold of 0.04 is less (more conservative) than the Federal Transit Administration (FTA) building damage threshold for a reinforced concrete building.

Table 5.5-1: Vibration Screening Standards

Caltrans Guidelines	Peak Particle Velocity for Continuous Sources (PPV) (in/sec)
Human Annoyance	
Barely Perceptible	0.01
Distinctly Perceptible	0.04
Strongly Perceptible	0.10
Severe	0.40

Source: Caltrans Transportation and Construction Vibration Guidance Manual, September 2013, Tables 19 & 20.

Title 24, California Building Code

State regulations related to noise include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior sources, the noise insulation standards set forth an interior standard of DNL 45 dBA in any habitable room and, where such units are proposed in areas subject to noise levels greater than DNL 60 dBA, require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard. If the interior noise level depends upon windows being closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

The mandatory measures for non-residential buildings state that new construction shall provide an interior noise level that does not exceed an hourly equivalent level of 50 dBA Leq in occupied areas during any hour of operation. Title 24 standards are enforced through the City's building permit application process.

5.5.2.3 Local and Regional Regulations

County of Orange General Aviation Noise Ordinance

To reduce noise from operation of John Wayne Airport (SNA) the General Aviation Noise Ordinance was adopted by the County to regulate the hours of operation and the maximum permitted noise levels associated with general aviation operations. The General Aviation Noise Ordinance specifies noise limits at each noise monitoring station that vary by time of day. The Ordinance also prohibits commercial aircraft departures between the hours of 10:00 p.m. and 7:00 a.m. and arrivals between the hours of 11:00 p.m. and 7:00 a.m.

John Wayne Airport Environs Land Use Plan

The John Wayne Airport Environs Land Use Plan (AELUP) was adopted in 1975 and amended in 2008 and is the applicable compatibility plan for John Wayne Airport. The land use compatibility plan establishes policies to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace. Further, implementation of this plan forestalls urban encroachment on the airport and allows for its continued operation (Airport Land Use Commission for Orange County, 2008).

General Plan

The City's General Plan Land Use Element includes the following goals and policies that are relevant to the proposed Project (City of Tustin, 2018):

Goal 2: **Ensure that future land use decisions are the result of sound and comprehensive planning.**

Policy 2.6: Maintain consistency with the Airport Environs Land Use Plan (AELUP) for John Wayne Airport in terms of maximum allowable building height, noise levels, safety areas, and other applicable standards.

The City's General Plan Noise Element includes the following goals and policies that are relevant to the proposed Project:

Goal 2: **Incorporate noise considerations into land use planning decisions.**

Policy 2.3: Use noise/land use compatibility standards as a guide for future planning and development.

Policy 2.4: Review proposed projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise impacts.

Policy 2.5: Require new residential developments located in proximity to existing commercial/industrial operations to control residential interior noise levels as a condition of approval.

Policy 2.8: Replace a significant noise source with non-noise generating land uses when plans for future use of areas are developed.

Goal 3: **Develop measures to control non-transportation noise impacts.**

Policy 3.1: Use noise/land use compatibility standards as a guide for future planning and development.

Policy 3.2: Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.

Policy 3.2: Use noise/land use compatibility standards as a guide for future planning and development.

The City's Noise Element also includes standards related to excessive noise levels. The City's General Plan noise standards for land uses are provided in Table 5.5-2.

Table 5.5-2: City of Tustin General Plan Noise Element Standards

Land Use	Noise Standards[1]	
	Interior[2,3]	Exterior
Residential-Single family, multifamily, duplex, mobile home	CNEL 45 dB	CNEL 65 dB[4]
Residential-Transient lodging, hotels, motels, nursing homes, hospitals	CNEL 45 dB	CNEL 65 dB
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	Leq(12) 45 dB(A)	-
Schools	Leq(12) 45 dB(A)	Leq(12) 67 dB(A)[5]
General offices, reception, clerical, etc.	Leq(12) 50 dB(A)	-
Bank lobby, retail store, restaurant, typing pool, etc.	Leq(12) 55 dB(A)	-
Manufacturing, kitchen, warehousing, etc.	Leq(12) 65 dB(A)	-
Parks, playgrounds	-	CNEL 65 dB[5]
Golf courses, outdoor spectator sports, amusement parks	-	CNEL 70 dB[5]

Source: City of Tustin General Plan Noise Element

Notes: (1) CNEL: Community Noise Equivalent Level. Leq(12): The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation). (2) Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment. (3) Indoor environment excluding bathrooms, toilets, closets and corridors. (4) Outdoor environment limited to rear yard of single-family homes, multifamily patios and balconies (with a depth of 6' or more) and common recreation areas. (5) Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

Tustin City Code

Pursuant to Tustin City Code Sections 4614 and 4615, noise levels at residential properties are restricted from exceeding certain noise levels for extended periods of time. Table 5.5-3 provides the Municipal Code interior and exterior noise standards that are applied to residential properties.

Table 5.5-3: City of Tustin Municipal Code Residential Noise Standards

Land Use	Interior		Exterior	
	Time	Permissible Noise Levels (dBA)	Time	Permissible Noise Levels (dBA)
Residential	7:00 a.m. to 10:00 p.m.	55 dBA	7:00 a.m. to 10:00 p.m.	55 dBA
	10:00 p.m. to 7:00 a.m.	40 dBA	10:00 p.m. to 7:00 a.m.	50 dBA
Mixed-Use	7:00 a.m.—10:00 p.m. (residential uses only)	55 dBA	any time	60 dBA
	10:00 p.m. to 7:00 a.m. (residential uses only)	45 dBA		

Source: City of Tustin Municipal Code, Article 4, Chapter 6, Section 4614 and 4615.

With respect to construction-related noise, Section 4616 of the Tustin City Code specifies that noise sources associated with construction activities are prohibited before 7:00 AM and after 6:00 PM, Monday through Friday; before 9:00 AM and after 5:00 PM on Saturdays; anytime on Sundays; or anytime during City-observed federal holidays (City of Tustin, 2024).

5.5.3 ENVIRONMENTAL SETTING

Existing Noise Levels

To assess existing noise levels of the environment, long-term (24-hour) noise level measurements were conducted on January 23 and 24, 2024, at two locations as shown on Figure 5.5-1. The background ambient noise levels in the Project area are dominated by the transportation-related noise associated with surface streets and surrounding commercial and office uses. Table 5.5-4 provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown in Table 5.5-4, the calculated CNEL levels range from 66.9 dBA CNEL to 73.7 dBA CNEL.

Table 5.5-4: Summary of 24-Hour Ambient Noise Level Measurements

Location		Daytime Noise Levels[1] (dBA L_{eq})	Evening Noise Levels[2] (dBA L_{eq})	Nighttime Noise Levels[3] (dBA L_{eq})	Daily Noise Levels (dBA CNEL)
LT-1	14122 Paseo Verde, Tustin, CA 92780. Located in the front yard of a home on a tree, approximately 60 feet away from the Vandenberg Lane centerline.	64.7– 66.8	61.9 – 64.9	50.4 – 62.3	66.9
LT-2	14032 Enderle Center Drive, #102, Tustin, CA 92780. Located south of an office building in the parking lot on a light pole, approximately 120 feet away from the Enderle Center Drive centerline.	65.8 – 68.8	69.4 – 69.8	62.4 – 69.2	73.7

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C).
Note: Noise measurements were conducted from January 23 to January 24, 2024, starting at 2:00 p.m.
[1] Daytime Noise Levels = noise levels during the hours from 7:00 a.m. to 7:00 p.m.
[2] Evening Noise Levels = noise levels during the hours from 7:00 p.m. to 10:00 p.m.
[3] Nighttime Noise Levels = noise levels during the hours from 10:00 p.m. to 7:00 a.m.

Existing Vibration

Aside from periodic construction work that may occur in the vicinity of the Project area, the Project site and adjacent land uses are not currently exposed to sources of groundborne vibration.

Existing Airport Noise

John Wayne Airport (SNA) is located approximately 5.5 miles southwest of the Project site. The Project site is located outside of the airport's 60 CNEL noise contour. In addition, the General Aviation Noise Ordinance restricts airport operations between 11:00 p.m. and 7:00 a.m., to limit the hours of noise generated by SNA.

Sensitive Receptors

Sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: residences, schools, hospitals, and recreation areas. Existing offsite sensitive noise receptors where someone can remain for 24 hours in the vicinity of the Project site consists of residences. The closest offsite residences are located 70 feet south of the site as listed in Table 5.5-5.

Table 5.5-5: Closest Sensitive Receptors to the Project Site

Receptor Description	Distance and Direction from the Project Site
Residential	70 feet to the south
Commercial/Office	20 feet to the east
Commercial/Office	140 feet to the north
Commercial/Office	95 feet to the west

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C).

This page intentionally left blank.

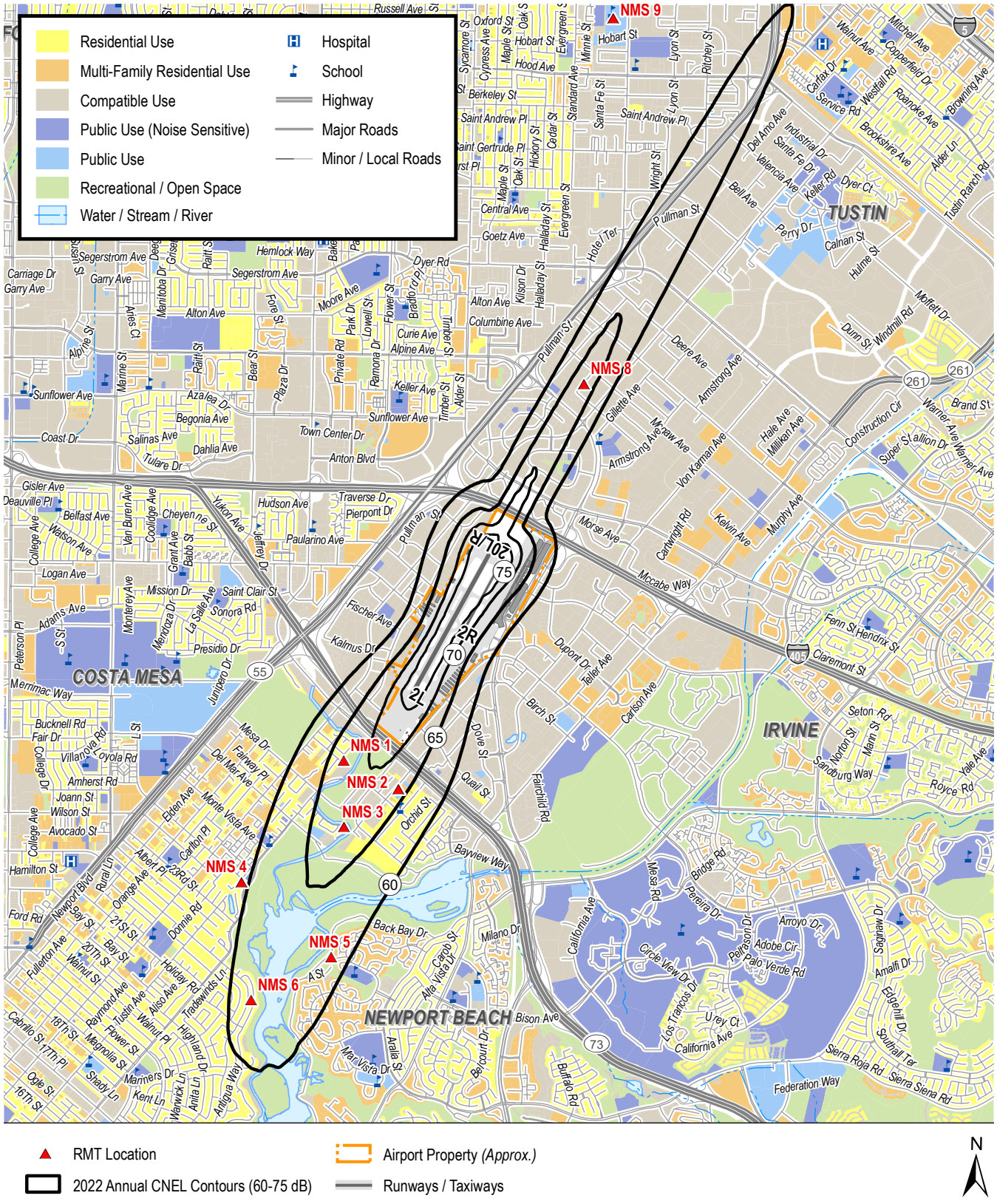
Noise Measurement Locations

Enderle Center Rezone Project
City of Tustin

Figure 5.5-1

This page intentionally left blank.

Airport Noise Contours



Enderle Center Rezone Project
City of Tustin

Figure 5.5-2

This page intentionally left blank.

5.5.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to result in:

NOI-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

NOI-2 Generation of excessive groundborne vibration or groundborne noise levels.

NOI-3 For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

Construction Noise and Vibration

A potentially significant construction noise and vibration impact could occur if Project-related construction activities:

- Occur before 7:00 AM and after 6:00 PM Monday through Friday, before 9:00 AM and after 5:00 PM on Saturday, anytime on Sundays, or anytime on City-observed federal holidays (City of Tustin, 2024);
- Create noise levels which exceeds the Federal Transit Administration (FTA) threshold of daytime exterior construction noise level of 80 dBA Leq or 70 dBA Leq nighttime acceptable noise level threshold at nearby sensitive receiver locations; or
- Generate vibration levels which exceed the Caltrans *Transportation and Construction Vibration Guidance Manual* vibration threshold of 0.3 PPV in/sec at nearby buildings.

Off-Site Traffic Noise

A potentially significant noise and vibration impact could occur if offsite traffic noise levels at existing and future noise-sensitive land uses (e.g., residential, etc.):

- Are less than 60 dBA CNEL and the project creates a *readily perceptible* 5 dBA CNEL or greater project-related noise level increase; or
- Range from 60 to 64 dBA CNEL and the project creates a *barely perceptible* 3 dBA CNEL or greater project-related noise level increase; or
- Already exceeds 65 dBA CNEL, and the project creates a community noise level impact of greater than 1.5 dBA CNEL.

Operational Noise

The proposed Project may result in a potentially significant operational noise impact if Project-related operational (stationary source) noise levels exceed the exterior 55 dBA daytime (7:00 a.m. to 10:00 p.m.) or 50 dBA nighttime (10:00 p.m. to 7:00 a.m.) noise level standards for sensitive residential land uses.

5.5.5 METHODOLOGY

Construction Noise

To identify the temporary construction noise contribution to the existing ambient noise environment, the construction noise levels anticipated from usage of construction equipment necessary for future buildout of

the proposed Project were combined with the existing ambient noise level measurements at the sensitive receiver locations. The construction noise levels are compared against the thresholds listed previously to assess the level of significance associated with temporary construction noise level impacts.

Operational Noise

The primary source of noise associated with the operation from buildout of the proposed Project would be from vehicular trips. The expected roadway noise level increases from vehicular traffic were calculated using the Federal Highway Administration (FHWA) traffic noise prediction model and the average daily traffic volumes prepared for the proposed Project. As detailed in Section 5.9, *Transportation,* existing uses on the Project site generate approximately 7,058 average daily trips (ADT). With the buildout of the proposed housing units and remaining commercial buildout capacity, the proposed Project would generate approximately 11,470 ADT, resulting in 4,412 net new ADT. The increase in noise levels generated by the vehicular trips have been quantitatively estimated and compared to applicable noise standards and thresholds of significance.

Secondary sources of noise would include new stationary sources (such as heating, ventilation, and air conditioning units) associated with the buildout of the new buildings on the Project site. The increase in noise levels generated by these activities has been qualitatively analyzed and additional requirements for future projects analysis are specified.

Vibration

Aside from noise levels, groundborne vibration would also be generated during construction at future buildout of the proposed Project by various construction-related activities and equipment; and could be generated by truck traffic traveling to and from the Project site. The potential ground-borne vibration levels resulting from construction activities occurring from the proposed Project were estimated by data published by the Federal Transit Administration (FTA). Thus, the groundborne vibration levels generated by these sources have also been quantitatively estimated and compared to the applicable thresholds of significance listed previously.

5.5.6 ENVIRONMENTAL IMPACTS

IMPACT NOI-1: THE PROJECT WOULD NOT RESULT IN GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES.

Less than Significant Impact with Mitigation.

Construction

As described in Section 3.0, *Project Description* of this DEIR, the proposed Project would consist of a Housing Overlay (HO) zone (overlay district) for the Project site which would allow residential on the Project site to accommodate up to 413 housing units on 7 acres in areas that are currently used for surface parking. In addition, there is a remaining development potential of 118,474 SF of nonresidential land uses (i.e. retail, restaurant, office, etc.). The proposed Project does not propose any specific development projects; therefore, no development is proposed as part of this Project. However, the following analysis considers the future development of 413 units associated with the HO zone and remaining commercial buildout capacity which is expected to occur anytime between October 2024 and October 2029.

Construction activities for the residential units would include demolition of the surface parking lot, site preparation, grading, building construction, paving, and architectural coatings. As such, noise generated by

construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that can reach high levels when combined. Construction is expected to occur in the following stages: site preparation and grading, building construction, architectural coating, paving. The project construction composite noise levels at a distance of 50 feet would range from 74 dBA Leq to 88 dBA Leq with the highest noise levels occurring during the site preparation and grading phases, as shown in Table 5.5-6.

Table 5.5-6: Construction Reference Noise Levels

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (Lmax) at 50 Feet[2]
Auger Drill Rig	20	84
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Paver	50	77
Pickup Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Trencher	50	80
Welder	40	73

Source: FHWA Roadway Construction Noise Model User's Guide, Table 1 (FHWA 2006). Note: Noise levels reported in this table are rounded to the nearest whole number.
1 Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
2 Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
FHWA = Federal Highway Administration Lmax = maximum instantaneous sound level

Per the Tustin City Code Section 4616, construction activities are allowed only between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays, with no activity

allowed on Sundays and City-observed federal holidays. Construction activities for future buildout would be required to occur within the City's designated hours. Thus, future buildout construction activities would be in compliance with the City's construction-related noise standards.

In addition, construction noise would be temporary in nature as the operation of each piece of construction equipment would not be constant throughout the construction day, and equipment would be turned off when not in use. The typical operating cycle for a piece of construction equipment involves one or two minutes of full power operation followed by three or four minutes at lower power settings. Construction equipment for future buildout is anticipated to include a combination of trucks, power tools, concrete mixers, and portable generators.

While construction noise would vary, it is expected that composite noise levels during construction at the nearest residential uses south of the Project would reach 70 dBA Leq. These predicted noise levels would only occur when all construction equipment is operating simultaneously and therefore, are conservative assumptions. While construction-related short-term noise levels have the potential to be higher than existing ambient noise levels in the Project area under existing conditions, the noise impacts would no longer occur once construction is completed. As shown on Table 5.5-7, construction noise from future buildout of the proposed Project at the nearby receptor locations would range from 67 to 70 dBA Leq, which would not exceed the 90 dBA Leq and 100 dBA Leq 1-hour construction noise level criteria as established by the FTA for residential and commercial land uses. Therefore, impacts related to construction noise would be less than significant.

Table 5.5-7: Construction Noise Level at Nearest Receptors

Receptor (Location)	Composite Noise Level (dBA Leq) at 50 feet[1]	Distance (feet)	Composite Noise Level (dBA Leq)
Residential (South)	88	380	70
Commercial/Office (East)		380	70
Residential (North)		440	69
Office (West)		515	67

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C)
1 The composite construction noise level represents the grading phase which is expected to result in the greatest noise level as compared to other phases.

Operation

Less than Significant Impact.

As described previously, a specific development project is not proposed as part of this Project, thus the following analysis considers the future development of 413 units associated with the HO Zone and remaining commercial buildout capacity, which is expected to occur anytime between October 2024 and October 2029.

Potential noise impacts associated with the operations of the proposed Project after buildout would be from Project-generated vehicular traffic on the nearby roadways and from onsite activities, as described below. The existing uses generate approximately 7,058 average daily trips (ADT). With the buildout of the proposed housing units and remaining commercial buildout capacity, the proposed Project would generate approximately 11,470 ADT, resulting in 4,412 net new ADT.

Traffic Noise Impacts

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic.

As detailed in Section 5.9, *Transportation*, buildout of the proposed Project is anticipated to generate approximately 4,412 net new ADT, including 313 new trips during the AM peak hour and 393 new trips during the PM peak hour. Regional access to the Project site is provided by I-55. Local access to the site is provided via 17th Street, Yorba Street, Enderle Center Drive, and Vanderberg Lane. Table 5.5-8 provides the traffic noise levels for the existing with and without Project scenarios and opening year with and without Project, and future year with and without Project scenarios. These noise levels represent the worst-case scenario, which assumes no shielding is provided between the traffic and the location where the noise contours are drawn.

As shown in Table 5.5-8, the increase in Project-related traffic noise would be no greater than 2.3 dBA from existing baseline conditions which is below the threshold of a 3.0 dBA noise level increase. Therefore, traffic noise impacts from buildout of the proposed Project on off-site sensitive receptors would be less than significant.

Stationary Noise Impacts

The Project and adjacent offsite land uses would be potentially exposed to stationary-source noise impacts from the proposed onsite heating, ventilation, and air conditioning (HVAC) equipment and truck deliveries and loading and unloading activities. It is expected that on-site stationary sources would meet the City of Tustin maximum noise level standards.

However, given that specific details related to stationary impacts of future development within Enderle Center are not known at this time, and will not be known until a development project is proposed, Mitigation Measure NOI-1 (MM NOI-1) is included. MM NOI-1 would require all future development projects to prepare a project-specific Final Acoustical Report to determine whether any proposed exterior noise sensitive areas would experience noise levels greater than 65 dBA CNEL or interior noise levels of 45 dBA CNEL; and to identify any noise reduction features for the proposed development (e.g. upgraded windows with Sound Transmission Class (STC) ratings of 30–35). Additionally, the Final Acoustical Report shall confirm that proposed siting of noise-generating stationary sources, if any, will not result in an exceedance of applicable noise thresholds at surrounding land uses. Thus, with implementation of MM NOI-1, impacts related to stationary noise impacts would be less than significant.

Table 5.5-8: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
17th St between SR-55 SB Ramps & SR-55 NB Ramps	39,346	68.9	39,802	68.9	44,963	69.5	0.6	41,852	69.2	47,013	69.7	0.5
17th St between SR-55 NB Ramps & Carroll Way-Yorba St South	38,861	68.8	39,155	68.9	46,611	69.6	0.7	40,478	69.0	47,934	69.7	0.7
17th St between Carroll Way-Yorba St South & Yorba St North-Enderle Center Dr	34,006	68.3	34,151	68.3	39,312	68.9	0.6	34,801	68.4	39,963	69.0	0.6
Yorba St between 17th St & Vandenberg Ln	5,174	60.6	5,607	60.9	10,768	63.8	2.9	7,555	62.2	12,716	64.5	2.3
Enderle Center Dr between 17th St & Vandenberg Ln	3,197	53.6	3,453	53.9	6,320	56.6	2.7	4,604	55.2	7,471	57.3	2.1

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C)
Note: Shaded cells indicate roadway segments adjacent to the project site.
ADT = average daily traffic

IMPACT NOI-2: THE PROJECT WOULD NOT RESULT IN GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS.

Less than Significant Impact.

Construction

As described in Section 3.0, *Project Description* of this DEIR, residential uses are currently not allowed on the Project site. The Project includes a General Plan Amendment (GPA) to establish a HO, which would allow for the development of up to 413 residential units over approximately 7 acres of developable land within the existing 11.8-acre site. The proposed Project does not propose any specific development projects; therefore, no development is proposed as part of this Project. However, the following analysis considers the future development of 413 units associated with the Housing Overlay Zone and remaining commercial buildout capacity which could occur anytime between October 2024 and October 2029.

Construction activities for future development of the proposed Project would include demolition, excavation, and grading activities, which have the potential to generate low levels of groundborne vibration. People working in close proximity to the construction could be exposed to the generation of excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Site ground vibrations from construction activities very rarely reach the levels that can damage structures, but they can be perceived in the audible range and be felt in buildings very close to a construction site.

Demolition, excavation, and grading activities would be required for the future buildout of the Project and could result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. For example, FTA guidelines show that a building consisting of reinforced concrete, steel, or timber, sans plaster would not result in any construction vibration damage (LSA, 2024).Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference velocity of 0.089 in/sec peak particle velocity (PPV) or 87 vibration velocity decibels (VdB) of ground-borne vibration when measured at 25 feet as shown in Table 5.5-9.

Table 5.5-9: Vibration Source Levels for Construction Equipment

Equipment	Reference PPV/Lv at 25 feet	
	Peak Particle Velocity (inches/second)	Approximate Vibration Level (Lv) (VdB) at 25 feet
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C)
[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] Equipment shown in bold is expected to be used on site.
µin/sec = microinches per second; ft = foot/feet; FTA = Federal Transit Administration; in/sec = inch/inches per second; LV = velocity in decibels; PPV = peak particle velocity; RMS = root-mean-square; VdB = vibration velocity decibels

A significant vibration impact could occur if construction activities of the future buildout generate vibration levels which exceed the FTA guidelines vibration threshold of 0.2 PPV in/sec at receiver locations or if construction were to occur during the City's prohibited hours.

The primary source of vibration during future construction would be the operation of a bulldozer. As shown on Table 5.5-9, a large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet. According to the Noise and Vibration Impact Analysis prepared for the proposed Project, the vibration level at the nearest offsite structure (70 feet away) would be 0.019 inch per second PPV during future buildout, as shown in Table 5.5-10, which is below the FTA vibration threshold of 0.2 PPV inch per second (LSA, 2024). Additionally, Section 4616 of the Tustin City Code specifies that noise sources associated with construction activities are prohibited before 7:00 AM and after 6:00 PM, Monday through Friday; before 9:00 AM and after 5:00 PM on Saturdays; anytime on Sundays; or anytime during City-observed federal holidays. Therefore, construction related vibration would not occur during sensitive nighttime hours. Therefore, impacts related to construction vibration would be less than significant.

Table 5.5-10: Construction Vibration Levels at Nearest Receptors

Receptor (Location)	Reference Vibration Level (PPV) at 25 ft[1]	Distance (ft) [2]	Vibration Level (PPV)
Residential (South)	0.089	70	0.019
Commercial/Office (East)		20	0.124
Residential (North)		140	0.007
Office (West)		95	0.012

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C)
[1] The reference vibration level is associated with a large bulldozer which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures

Operation

Less than Significant Impact. As described previously, no development is proposed as part of this Project, thus the following analysis considers the future development of 413 residential units associated with the HO zone and remaining commercial buildout capacity, which could occur in the near future.

Potential vibration impacts associated with the operations of the proposed Project after buildout would be from vehicular traffic such as heavy trucks for residents moving in and out of the units, product deliveries to retail and restaurant uses, and garbage trucks for solid waste disposal. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. However, vibration levels generated from Project-related traffic on the adjacent roadways by on-road vehicles would not be excessive because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. The residential development contemplated by the Project would not generate a considerable level of heavy truck traffic or any other source of vibration. Likewise, the additional 118,474 SF of nonresidential land uses would not generate enough heavy truck traffic on their own to result in an increase in vibration impacts beyond existing conditions, nor would they generate any other source of vibration during operations. Thus, operational vibration impacts would be less than significant.

IMPACT NOI-3: THE PROJECT WOULD NOT, FOR A PROJECT LOCATED WITHIN THE VICINITY OF A PRIVATE AIRSTRIP OR AN AIRPORT LAND USE PLAN, OR WHERE SUCH A PLAN HAS NOT BEEN ADOPTED, WITHIN TWO MILES OF A PUBLIC AIRPORT OR PUBLIC USE

AIRPORT, EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO EXCESSIVE NOISE LEVELS.

No Impact. The Project site is located approximately 5.5 miles northeast of John Wayne Airport. According to Figure 5.5-2, *Airport Noise Contours,* of the John Wayne Airport AELUP, the Project site is not located within the 65 dBA CNEL noise contours (OC Airport Land Use Commission, 2008). No other airports exist within the vicinity of the Project. Thus, implementation and development of the Project would not result in a safety hazard or exposure to excessive noise for people residing or working in the area, and impacts would be less than significant.

5.5.7 CUMULATIVE IMPACTS

Cumulative noise assessment considers development of the proposed Project in combination with ambient growth and other development projects within the vicinity of the Project area. As noise is a localized phenomenon, and drastically reduces in magnitude as distance from the source increases, only projects and ambient growth in the nearby area could combine with the proposed Project to result in cumulative noise impacts.

Future development of the proposed Project in combination with the related projects would result in an increase in construction-related and traffic-related noise. However, Tustin City Code Article 4, Chapter 6, Section 4616 limits noise producing construction activities to the hours of 7:00 AM and 6:00 PM on weekdays, between 9:00 AM and 5:00 PM on Saturdays, any anytime on Sunday or City-observed federal holidays. Also, construction noise and vibration are localized in nature and decrease substantially with distance. Consequently, in order to achieve a substantial cumulative increase in construction noise and vibration levels, more than one source emitting high levels of construction noise would need to be in close proximity to construction of the future buildout.

Table 5-1 in Section 5.0, *Environmental Impact Analysis* lists the cumulative projects and provides a brief description and the distances from the Project site. The list includes 6 projects within the City of Santa Ana and 2 projects within the City of Tustin. As shown on Figure 5-1, there are no cumulative projects adjacent to or within hearing distance of the Project site. The closest cumulative project is Cumulative Project No. 1 (Medical Office Bldg.), which demolished an existing restaurant building and is constructing a 12,320 SF institutional building approximately 650 feet northeast of the Project site, along 17th Street. Cumulative construction could result in the exposure of people to the generation of excessive groundborne vibration and noise increases. Cumulative Project No.1 was approved by the Planning Commission on May 24, 2022, and is currently under construction.

The Project is solely a change in regulations to implement the City's certified Housing Element, so no construction is currently proposed. However, a future construction project is anticipated to occur between October 2024 and October 2029, which would involve construction. Construction of Cumulative Project No. 1 will likely be complete before a future project is approved as a result of the proposed Project. Therefore, it is unlikely construction activities of future projects implemented under the proposed Project would combine with Cumulative Project No. 1. Additionally, 17th Street separates the two projects, thus construction noise and vibration levels from the Project would not combine to become cumulatively considerable. Construction activities for cumulative projects would also be required to adhere to Municipal Code construction noise regulations. Thus, cumulative noise and vibration impacts associated with construction activities would be less than significant.

Cumulative mobile source noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed Project and related projects within the study area. Therefore, cumulative traffic-generated noise impacts have been assessed based on the contribution of the proposed Project traffic

volumes on the roadways in the Project vicinity. The increase in noise levels associated with the traffic volumes of the proposed Project were previously identified. As detailed, buildout of the proposed Project would result in noise levels much lower than the 3 dBA threshold. Therefore, the Project would not result in a cumulatively considerable impact when combined with existing and future development. Cumulative impacts would be less than significant.

5.5.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- Tustin City Code Article 4, Chapter 6, Section 4616

Plans, Programs, or Policies

PPP NOI-1: **Construction Hours.** Per the Tustin City Code Section 4616, construction activities are allowed only between the hours of 7:00 AM and 6:00 PM, Monday through Friday and between 9:00 AM to 5:00 PM on Saturdays with no activity allowed on Sundays and City-observed federal holidays.

5.5.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Prior to mitigation, Impact NOI-1 would be potentially significant without mitigation. With compliance with existing regulations, Impact NOI-2 would be less than significant. No impact would occur related to Impact NOI-3.

5.5.10 MITIGATION MEASURES

MM NOI-1 All future development shall prepare a project-specific Final Acoustical Report to confirm whether any proposed exterior noise sensitive areas would experience noise levels greater than 65 dBA CNEL and whether interior noise levels would exceed 45 dBA CNEL, and identify any noise reduction features for the proposed development (e.g. upgraded windows with Sound Transmission Class (STC) ratings of 30–35). Additionally, the Final Acoustical Report shall confirm that proposed siting of noise-generating stationary sources, if any will not result in an exceedance of applicable noise thresholds at surrounding land uses.

5.5.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact NOI-1 would be less than significant after mitigation.

5.5.12 REFERENCES

Airport Land Use Commission for Orange County. (2008, April). *Airport Land Use Commission*. Retrieved from John Wayne Airport Orange County: https://www.ocair.com/about/administration/airport-governance/commissions/airport-land-use-commission/

City of Tustin. (2018). *City of Tustin General Plan*. Retrieved April 2024, from City of Tustin: https://www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF

City of Tustin. (2024). *Chapter 6, Noise Control*. Retrieved from City of Tustin Municipal Code: https://library.municode.com/ca/tustin/codes/code_of_ordinances?nodeId=ART4HESA_CH6NOCO_4617EX

LSA. (2024). *Noise and Vibration Impact Analysis Enderle Center Project.*

OC Airport Land Use Commission. (2008). *John Wayne Airport AELUP*. Retrieved from John Wayne Airport Orange County: https://www.ocair.com/about/administration/airport-governance/commissions/airport-land-use-commission/

This page intentionally left blank.

5.6 Population and Housing

5.6.1 INTRODUCTION

This section examines the existing population, housing, and employment conditions in the City of Tustin and assesses the proposed Project's potential impacts related to unplanned direct and indirect growth. The demographic data and analysis presented in this section is based, in part, on the following documents and resources:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin City Code.*
- *E-5 City/County Population and Housing Estimates, 1/1/2023*, California Department of Finance (DOF).
- *Demographics and Growth Forecast,* 2024, Southern California Association of Governments (SCAG).

Although evaluation of population, housing, and employment typically involves economic and social, rather than physical environmental issues, population, housing, and employment growth are often precursors to physical environmental impacts. According to Section 15382 of the CEQA Guidelines, "[a]n economic or social change by itself shall not be considered a significant impact on the environment." Socioeconomic characteristics should be considered in an EIR only to the extent that they create adverse impacts on the physical environment.

5.6.2 REGULATORY SETTING

5.6.2.1 Federal Regulations

No federal laws, regulations, or executive orders apply to the Project.

5.6.2.2 State Regulations

California Housing Element Law

California Planning and Zoning Law requires each city and county to adopt a general plan to guide future growth (California Government Code Section 65300). Among other things, the general plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the state level, the California Department of Housing and Community Development Department (HCD) estimates the relative share of California's projected population growth that would occur in each county based on California Department of Finance (DOF) population projections and historical growth trends. These figures are compiled by HCD in a Regional Housing Needs Assessment (RHNA) for each region of California. Where there is a regional council of governments, HCD provides the RHNA to the council. Such is the case for the City of Tustin, which is a member of the Southern California Association of Governments (SCAG). The council, in this case SCAG, then assigns a share of the regional housing need to each of its cities and counties. The HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing need.

Regional Housing Needs Allocation

The RHNA is mandated by state housing law as part of the periodic process of updating housing elements of local general plans. State law requires that housing elements identify RHNA targets set by HCD to

encourage each jurisdiction in the state to provide its fair share of very low-, low-, moderate-, and upper-income housing. The RHNA provides a long-term outline for housing within the context of local and regional trends and housing production goals.

SCAG determines total housing need for each city and county in Southern California based on three general factors: 1) the number of housing units needed to accommodate future population and employment growth; 2) the number of additional units needed to allow for housing vacancies; and 3) the number of very low, low, moderate, and above-moderate income households needed. All cities and counties are required to ensure that sufficient sites are planned and zoned for housing, such that area would be available to accommodate the projected housing needs, and to implement proactive programs that facilitate and encourage the production of housing commensurate with its housing needs.

The planning period for the 6th Cycle RHNA as prepared by SCAG, is an eight-year period from June 30, 2021, to October 15, 2029. The 6th Cycle RHNA allocated 6,782 housing units to the City of Tustin. The income breakdown of the required housing units is provided in Table 5.6-1.

Table 5.6-1: City of Tustin RHNA by Income Level

Income Level Category	Number of Housing Units	Percent of Total
Very Low (< 50% of AMI)	1,724	25%
Low (50% to 80% of AMI)	1,046	15%
Moderate (80% to 120% of AMI)	1,132	17%
Above Moderate (> 120% of AMI)	2,880	42%
Total	**6,782**	**100%**

Notes: AMI = Area Median Income
Source: (Southern California Associated of Governments, 2021)

SCAG Regional Transportation Plan/Sustainable Communities Strategy

On April 4, 2024, SCAG adopted "Connect SoCal," the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Connect SoCal integrates transportation planning with economic development and sustainability planning to comply with state greenhouse gas (GHG) emissions reduction goals, such as Senate Bill 375. The RTP/SCS is updated every four years as required by federal and state regulations.

According to the RTP/SCS, by 2050, the population of Southern California is projected to increase by two million people, with an increase of 1.6 million housing units, and 1.3 million jobs. However, growth is not expected to be uniform across the region's counties or cities. During that time, transportation infrastructure will need to substantially expand while also meeting the GHG emissions-reduction targets set by the California Air Resources Board.

SCAG is empowered by state law to assess regional housing needs and provide a specific allocation of housing needs for all economic segments of the community for each of the region's counties and cities. The determination of each City's and county's share of regional housing needs that is required by law to be reflected in municipal general plan housing elements is based on the growth projections of the RTP/SCS.

SCAG Regional Growth Projections

SCAG is responsible for producing socioeconomic forecasts and developing, refining, and maintaining macro and small-scale forecasting models. The forecasts are developed in five-year increments. The current SCAG projections are provided through the year 2050. Consistency with the growth forecast, at the sub-regional level, is one criterion that SCAG uses in exercising its federal mandate to review "regionally significant" development projects for conformity with regional plans.

Based on SCAG methodology, the number of local employment opportunities will increase from 51,700 in 2019 to 71,300 in 2050. Additionally, SCAG projects the City's housing units will increase from 27,000 in 2019 to 34,000 in 2050 (Southern California Association of Governments, 2024).

5.6.2.3 Local and Regional Regulations

General Plan

The following goals and policies from the City's 2021-2029 Housing Element are relevant to the proposed Project.

Goal 1: **Provision of an adequate supply of housing to meet the need for a variety of housing types and the diverse socio-economic needs of all community residents commensurate with the City's identified housing needs in the RHNA allocation.**

Policy 1.1: **Variety of Housing Choices:** Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.

Policy 1.3: **Regulatory Incentives.** Support the use of regulatory incentives, such as density bonuses and deferment of impact fees, to offset the costs of affordable housing while ensuring that potential impacts are addressed.

Policy 1.4: **Development Streamlining.** Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units, affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.

Policy 1.5: **Smart Growth Principles.** Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for the construction of higher density housing, affordable housing, and mixed-use development (the vertical and horizontal integration of commercial and residential uses) in proximity to employment opportunities, community facilities and services, and amenities.

5.6.3 ENVIRONMENTAL SETTING

Project Site

The Project site is approximately 11.80 acres and is currently developed with 87,136 SF of commercial business, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and surface parking lots.

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM).

The Project proposes the addition of a housing overlay district which would allow residential land uses in addition to the uses allowed under the existing PC COM zoning. Thus, the Housing Overlay (HO) district would be added "on top" of the existing PC COM zone (i.e., Base Zone).

In addition, the Project includes a General Plan Amendment to establish via text that a higher density of residential uses is allowed in the PCCB designation subject to limits contained within a Housing Overlay (HO) district (zoning) or as allowed by a specific plan. The Project also includes an amendment to Tustin City Code

(TCC), Article 9 (Land Use), Chapter 2 (Zoning), Part 5, to establish a HO district, which allows for high density residential development, and stipulates that objective design standards for residential development will apply to properties within the boundary of the HO district; and an amendment to the City's Zoning Map to add the newly codified HO district on top of the site's existing PC COM zoning.

Population

According to the California DOF, the City of Tustin had a population of 79,558 in 2023 (California Department of Finance, 2023). Based on SCAG Connect SoCal methodology, the City of Tustin had a population of 80,400 persons in 2019 and estimates that the City's population will increase to 93,317 in 2050[1], which is a 16.1 percent increase. In comparison, the SCAG projects the County of Orange will have a 7.8 percent increase in population between 2019 and 2050, as shown on Table 5.6-2.

Table 5.6-2: City and County Existing and Projected Population, 2019-2050

Year	City of Tustin Population	County of Orange Population
2019	80,400	3,191,000
2050	93,317	3,439,000
Projected Change	12,919	248,000
Projected Percent Change	16.1	7.8

Source: (Southern California Association of Governments, 2024)

Housing

The California DOF estimates that the City of Tustin contained 28,405 housing units in 2023. The housing types in the City of Tustin compared to those in the entire County are provided in Table 5.6-3. As shown, the County has a higher percentage of detached single-family housing units and a lower percentage of single-family attached and multi-family housing units than the City. In addition, the California DOF details that the City had an average household size of 2.88 persons per household. In comparison, the County had an average household size of 2.83 persons per household.

Table 5.6-3: City and County Housing Estimates by Type 2023

	City of Tustin Housing Units		County of Orange Housing Units	
Unit Type	**Number**	**Percent**	**Number**	**Percent**
Single-family detached	9,910	34.9%	570,763	49.6%
Single-family attached	3,944	13.9%	143,166	12.4%
Multi-family (2-4 units)	3,956	13.9%	94,541	8.2%
Multi-family (5+ units)	9,731	34.3%	309,290	26.9%
Mobile Homes	864	3.0%	32,183	2.8%
Total	28,405	100%	1,149,943	100%

Source: (California Department of Finance, 2023)

The California DOF 2023 population and housing estimates for the City of Tustin indicate a vacancy rate of 3.4 percent. In comparison, the Countywide vacancy rate is higher at 5.1 percent.

[1] The 2050 population estimate was derived using the methodology presented in Section 4.5 of the SCAG Demographics & Growth Forecast which states that an estimate of the future City-level population based on Connect SoCal's household forecast can be derived using a county-level Population: Housing ratio from TABLE 12 and applying it to the City's future household growth (Southern California Association of Governments, 2024).

As shown in Table 5.6-4, SCAG estimates that between 2019 and 2050, the number of housing units in the City will increase by 25.9 percent while the number of housing units in the County will increase by 17.2 percent.

Table 5.6-4: City and County Existing and Projected Housing Units, 2019-2050

Year	City of Tustin Housing Units	County of Orange Housing Units
2019	27,000	1,069,000
2050	34,000	1,253,000
Projected Change 2019-2050	7,000	184,000
Projected Percent Change 2019-2050	25.9	17.2

Source: (Southern California Association of Governments, 2024)

Employment

The City of Tustin is estimated to contain 51,700 employment opportunities as of 2019. The SCAG regional growth projections anticipate the number of jobs in the City of Tustin to increase by 37.9 percent to 71,300 jobs in the year 2050. In comparison, the County is projected to see a 11.9 percent increase in the number of jobs by 2050, as shown in Table 5.6-5.

Table 5.6-5: City and County Existing and Projected Employment, 2019-2050

Year	City of Tustin Employment	County of Orange Employment
2019	51,700	1,805,000
2050	71,300	2,019,000
Projected Change 2019-2050	19,600	214,000
Projected Percent Change 2019-2050	37.9	11.9

Source: (Southern California Association of Governments, 2024)

The SCAG 2019 Local Profile for Tustin identifies that 7.3 percent of Tustin residents work and live in the City, while 92.7 percent commute to other places (Southern California Association of Governments, 2019). Of the commuters residing in Tustin, the largest percentage commute to the City of Irvine (18.6 percent), Santa Ana (10.4 percent), Anaheim (5.5 percent), and Orange (5.2 percent).

Jobs – Housing Ratio

The jobs-housing ratio is a general measure of the total number of jobs and housing units in a defined geographic area, without regard to economic constraints or individual preferences. SCAG applies the jobs-housing ratio at the regional and subregional levels to analyze the fit between jobs, housing, and infrastructure. A major focus of SCAG's regional planning efforts has been to improve this balance. SCAG defines the jobs-housing balance as follows:

> Jobs and housing are in balance when an area has enough employment opportunities for most of the people who live there and enough housing opportunities for most of the people who work there. The region as a whole is, by definition, balanced…. Job-rich subregions have ratios greater than the regional average; housing-rich subregions have ratios lower than the regional average. Ideally, job-housing balance would… assure not only a numerical match of jobs and housing but also an economic match in type of jobs and housing.

There is no ideal ratio adopted in state, regional, or city policies. However, the American Planning Association recommends a target ratio of 1.5 jobs per housing unit; communities with more than 1.5 jobs per dwelling

unit are considered jobs-rich; those with fewer than 1.5 are "housing rich," meaning that more housing is provided than employment opportunities in the area (Weitz, 2003). A job-housing imbalance can indicate potential air quality and traffic problems associated with commuting. Table 5.6-6 provides the projected jobs-to-housing ratios for the City, based on SCAG's 2024-2050 RTP/SCS.

Table 5.6-6: Jobs – Housing Trends in the City of Tustin

	Employment in 2019	Number of Dwelling Units in 2019	2019 Jobs to Housing Ratio	Employment in 2050	Number of Dwelling Units in 2050	2050 Jobs to Housing Ratio
City of Tustin	51,700	27,000	1.91	71,300	34,000	2.1
County of Orange	1,805,000	1,069,000	1.67	2,019,000	1,253,000	1.61

Source: (Southern California Association of Governments, 2024)

As shown on Table 5.6-6, the projected 2050 jobs-to-housing ratios for the City of Tustin and Orange County are 2.1 and 1.61, respectively. This indicates that both the City of Tustin and Orange County are job-rich. Therefore, it is possible that people employed in the City of Tustin are commuting from elsewhere.

5.6.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

POP-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

POP-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The Initial Study (Appendix A) established that the proposed Project would not result in impacts related to Threshold POP-2; therefore, no further assessment of this threshold is required in this Draft EIR.

5.6.5 METHODOLOGY

CEQA Guidelines Section 15064(e) states that a social or economic change generally is not considered a significant effect on the environment unless the changes can be directly linked to a physical adverse change. Additionally, CEQA Guidelines Appendix G indicates that a project could have a significant effect if it would induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). Therefore, population impacts are considered potentially significant if growth associated with the proposed Project would exceed projections for the area and if such an exceedance would have the potential to create a significant adverse physical change to the environment.

The methodology used to determine population, housing, and employment impacts began with data collection regarding existing population and housing trends, which was obtained from the U.S. Census, state of California DOF, and SCAG. 2024 SCAG data was used to determine the City's long-term population, housing, and employment growth projections for the next 30 years. Additionally, 2023 California DOF data was used to determine the existing population, estimated number of housing units in the City, and average persons per household, as this was the available dataset at the time the NOP was released. The DOF benchmarked all 2023 population and housing estimates to the 2020 decennial census. U.S. Census data was also used, specifically, to capture the current employment statistics related to construction in the City. If projected growth from the Project would exceed growth projections for the City and could create a

significant change to the environment, the resulting growth would be considered "substantial," and a significant impact would result.

5.6.6 ENVIRONMENTAL IMPACTS

IMPACT POP-1: THE PROJECT WOULD NOT INDUCE SUBSTANTIAL UNPLANNED POPULATION GROWTH IN AN AREA, EITHER DIRECTLY (FOR EXAMPLE, BY PROPOSING NEW HOMES AND BUSINESSES) OR INDIRECTLY (FOR EXAMPLE, THROUGH EXTENSION OF ROADS OR OTHER INFRASTRUCTURE).

Less than Significant.

Housing and Population Growth: The proposed Project is a housing overlay within the Enderle Center site. A specific development project is not proposed as part of this Project. The Project site does not currently support residential uses. However, the development that could occur from future buildout of the proposed housing zone is 413 dwelling units and 118,474 SF of additional nonresidential buildout. As described previously, the City has an average of approximately 2.88 persons per household (California Department of Finance, 2023). Using this estimate, buildout of the proposed 413 units could result in an additional 1,189 residents in the City.

As shown in Table 5.6-2, the population in the City of Tustin is expected to increase by 12,919 people between 2019 and 2050. As shown in Table 5.6-4, housing stock in the city is expected to increase by 7,000 dwelling units between 2019 and 2050. Based on these growth projections, full buildout of the Project would represent approximately 9.2 percent of the projected population growth and 5.9 percent of the projected housing stock growth in the city. Thus, while the Project would result in an increase in population and housing units in an area not previously planned for housing, the increase in population and number of housing units that would result from the proposed Project would not exceed projections for the City.

Further, as reflected in Table 5.6-1, SCAG determined the City needs to provide a total of 6,782 housing units to meet their RHNA. The City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, the Enderle Center (the Project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. Thus, while the proposed Project would result in an increase to projected planned population, the Project would in part satisfy the State requirements to provide new housing opportunities to increase housing supply. Additionally, the proposed Project supports goals and policies of the Housing Element aimed to support a variety of housing types and densities. These include:

- **Goal 1: Provision of an adequate supply of housing to meet the need for a variety of housing types and the diverse socio-economic needs of all community residents commensurate with the City's identified housing needs in the RHNA allocation.**
- Policy 1.1: Variety of Housing Choices. Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.
- Policy 1.3: Regulatory Incentives. Support the use of regulatory incentives, such as density bonuses and deferment of impact fees, to offset the costs of affordable housing while ensuring that potential impacts are addressed.
- Policy 1.4: Development Streamlining. Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units,

affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.

- Policy 1.5: Smart Growth Principles. Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for the construction of higher density housing, affordable housing, and mixed-use development (the vertical and horizontal integration of commercial and residential uses) in proximity to employment opportunities, community facilities and services, and amenities.

Employment Growth: As described in Chapter 3, *Project Description*, the Project also anticipates the future nonresidential capacity buildout of 118,474 SF within a portion of the Project site that allows non-residential development. Using employment generation rates from the 2001 SCAG Employment Density Report, buildout of the 118,474 SF of nonresidential space would result in approximately 365 employees (1 employee per 325 SF) (The Natelson Company, Inc., 2001).

As shown in Table 5.6-5, employment in the City of Tustin is expected to increase by 19,600 jobs between 2019 and 2050. Based on these growth projections, buildout of the nonresidential portion of the Project would represent approximately 1.86 percent of the projected employment growth in the City. Thus, while the Project would result in an increase in employment, the increase in the number of jobs that would result from the proposed Project would not exceed projections for the City.

Jobs-Housing Balance. Effects of the proposed Project on jobs-housing balance are evaluated by adding project-generated jobs and housing units to forecasts of employment and housing. As described previously, the City of Tustin is jobs-rich, with an existing jobs-housing ratio of 1.91. The proposed Project would reduce (improve) the jobs-housing ratio slightly by adding 413 residential units. The proposed Project would provide a regional beneficial effect of providing the opportunity for housing on the Project site in a jobs-rich area, where employees can easily travel to nearby employment opportunities.

In addition, because the area is jobs-rich, the addition of residential units in the area would not require additional jobs that could result in growth. Conversely, the new residents would fill the need for employees that are anticipated by SCAG projections. Thus, the additional residential units would not indirectly result in the need for additional employment opportunities, which could result in growth. Therefore, this indirect impact related to growth would be less than significant.

Construction. A specific development project is not proposed as part of this Project; however, construction of future residential uses that may occur as a result of this Project would result in a temporary increased demand for construction workers. Construction workers are anticipated to come from the City and surrounding jurisdictions and commute daily to the jobsite. Although it is possible that the demand for workers could induce some people to move to the region, this consideration would be de minimis, relative to the total number of construction workers in the region. According to the U.S. Census Bureau, 2,303 individuals are employed in the construction industry in the City of Tustin and 72,855 individuals are employed in the construction industry in Orange County as a whole (United States Census Bureau, 2022). The supply of general construction labor in the vicinity of the Project area is not expected to be constrained due to the temporary nature of construction projects. As such, the existing labor pool can meet the construction needs of the Project, and this labor pool would increase with the continued projected growth of Orange County. Therefore, implementation of the Project would not induce substantial unplanned population growth directly or indirectly through construction employment that could cause substantial adverse physical changes in the environment. Impacts would be less than significant.

Infrastructure. Future development of the Project may require expansion of infrastructure to serve the proposed uses at the site, including installation of new storm drains, wastewater, water (potable and reclaimed), and dry utilities that would connect to existing facilities within the Project site or adjacent to the

Project area. However, as outlined in Section 3.0, *Project Description,* specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed. Future development associated with allowed uses in accordance with the proposed Housing Overlay Zone would be required to undergo project-level environmental analysis under CEQA on a case-by-case basis. As such, future development projects would be required to analyze project-specific impacts related to infrastructure improvements and the City's existing population and housing stock.

5.6.7 CUMULATIVE IMPACTS

Impacts from cumulative population growth are considered in the context of their consistency with local and regional planning efforts. As discussed, SCAG's 2024-2050 RTP/SCS serves as a long-range vision plan for development in the counties of San Bernardino, Imperial, Los Angeles, Orange, Riverside, and Ventura. The Project would not exceed the SCAG population, housing, and employment growth projections for the City and would represent a nominal percentage of SCAG's overall projections for the City of Tustin. The Project could result in a generation of 413 residential units at full buildout. Based on the growth projections analyzed in SCAG's 2024-2050 RTP/SCS, full buildout of the Project would represent approximately 9.2 percent of the projected population growth and 5.9 percent of the projected housing stock growth in the City of Tustin. The Project is within the growth projections used to prepare RTP/SCS, thus, impacts related to cumulative growth would be less than significant and not cumulatively considerable.

5.6.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

California Government Code Sections 65300, 65580–65589

Plans, Programs, or Policies

None.

5.6.9 PROJECT DESIGN FEATURES

None.

5.6.10 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact POP-1 would be less than significant.

5.6.11 MITIGATION MEASURES

No mitigation measures are required.

5.6.12 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to population and housing would occur.

5.6.13 REFERENCES

California Department of Finance. (2023, May). *E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2023*. Retrieved from State of California Department of Finance.

California State University Fullerton. (2023). *Orange County Jurisdiction Demographics*. Retrieved from College of Humanities and Social Sciences, Center for Demographic Research.

City of Tustin. (2022). *Final Housing Element 2021-2029*.

Southern California Associated of Governments. (2021). *Regional Housing Needs Assessment*. Retrieved from Southern California Associated of Governments: https://scag.ca.gov/rhna

Southern California Association of Governments. (2019, May). *Local Profiles*. Retrieved from Southern California Association of Governments: https://scag.ca.gov/data-tools-local-profiles

Southern California Association of Governments. (2024). *Demographics and Growth Forecast Technical Report*.

The Natelson Company, Inc. (2001). *Employment Density Study Summary Report*.

United States Census Bureau. (2022). *Industry by Sex for the Full-Time, Year-Round Civilian Employed Population 16 Years and Over. American Community Survey, ACS 1-Year Estimates Subject Tables, Table S2404*. Retrieved from United States Census Bureau: https://data.census.gov/table/ACSST1Y2022.S2404?q=Orange%20County,%20California&t=Industry&g=160XX00US0680854

Weitz, J. (2003). *Jobs-Housing Balance. Planning Advisory Service Report Number 516*. American Planning Association.

5.7 Public Services

5.7.1 INTRODUCTION

This section describes the existing fire protection, police protection, schools, and library facilities that serve the Project site and vicinity and evaluates the potential for implementation of the proposed Project to result in an impact. This section of the Supplemental EIR addresses whether there are physical environmental effects of new or expanded facilities that are necessary to maintain acceptable service levels related to fire, police, schools, and library services. Park services are addressed in Section 5.8, Parks and Recreation. Public utilities and service systems, including water, wastewater, drainage, and solid waste, are addressed in Section 5.11, Utilities and Service Systems. Information within this section is based on the following:

- City of Tustin General Plan (including 2021-2029 Housing Element). Adopted November 2018 (updated October 2022).
- Tustin City Code
- Data provided by each service provider

Because CEQA focuses on physical environmental effects, this section analyzes whether any physical changes resulting from an increase in service demands from development pursuant to the proposed Project could result in significant adverse environmental effects. Thus, an increase in staffing associated with public services, or an increase in calls for services, would not, by itself, be considered a physical change in the environment. However, physical changes in the environment resulting from the construction of new facilities or an expansion of existing facilities to accommodate the increased staff or equipment needs resulting from the proposed Project could constitute a significant impact.

5.7.2 FIRE PROTECTION SERVICES

5.7.2.1 FIRE PROTECTION REGULATORY SETTING

California Fire Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which include regulations concerning building standards (as also set forth in Title 24, Part 9 of the California Code of Regulations, the California Building Code), fire protection and notification systems, fire protection devices (such as extinguishers and smoke alarms), building evacuation and access standards, and fire suppression training.

California Health and Safety Code

Additional state fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Fighting Equipment," California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The

standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire house sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Orange County Fire Authority Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development

The Orange County Fire Authority (OCFA) Fire Prevention Guideline B-09 requires new structures to meet standards related to access driveways, siting of hydrants, water supply, and building access, as required by the California Fire Code. The guideline requires specific information be provided during the submittal of plans for development projects to demonstrate compliance with all codes and other regulations governing water availability for firefighting and emergency access to sites and structures within the jurisdictions served by the OCFA. In addition, the guideline requires that plans be reviewed by the OCFA.

City of Tustin General Plan

The City's General Plan Public Safety Element contains the following goals and policies related to fire services.

Goal 5: **Reduce the risk to the community's inhabitants from fires or explosions.**

Policy 5.1: Work closely with the Orange County Fire Authority to continue to operate an education program regarding fire hazards.

Policy 5.2: Encourage the use of fire retardant roofing materials.

Policy 5.3: Establish and maintain mutual aid agreements with surrounding jurisdictions for fire protection.

Policy 5.4: Enforce building code requirements that assure adequate fire protection.

Policy 5.5: Study alternatives for upgrading emergency water line capacities in deficient areas.

Policy 5.6: Cooperate with Orange County Fire Authority to ensure the provision of adequate and cost-effective fire protection services.

Tustin City Code

Chapter 8100 – Building and Construction Codes Adopted by Reference. The Tustin City Code adopts the California Fire Code as published by the California Building Standards Commission and the International Code Council by reference. The California Fire Code is Title 24, Part 9 of the California Code of Regulations, and regulates new structures, alterations, additions, changes in use or changes in structures. The Code includes specific information regarding safety provisions, emergency planning, fire-resistant construction, fire protection systems, means of egress and hazardous materials.

5.7.2.2 FIRE PROTECTION SERVICE ENVIRONMENTAL SETTING

Fire protection and emergency medical services in the City of Tustin are provided by the OCFA through a contract for services. The OCFA provides fire suppression, emergency medical, rescue, fire prevention, hazardous materials coordination, and wildland management services. OCFA serves 23 cities in Orange County and all unincorporated areas. Within the City of Tustin, OCFA provides services from three fire stations. Additionally, there are four fire stations in the City of Santa Ana and unincorporated Orange County within service distance from the Project site.

The Project site is within the Primary Responsibility Area of OCFA Station 21, which is located approximately 2 miles from the site. However, resources are deployed upon a regional service delivery system, assigning personnel and equipment to emergency incidents without regard to jurisdictional boundaries. Therefore, the site may be served by other OCFA stations in the vicinity. These include OCFA Station 72, located approximately 1.6 miles from the Project site; OCFA Station 70, located approximately 1.8 miles from the Project site; OCFA Station 75, located approximately 3.3 miles from the site; and OCFA Station 8, located approximately 3.6 miles from the site. The location, equipment, and staffing of the fire stations that would serve the Project site are provided in Table 5.7-1.

Table 5.7-1: Fire Stations Near the Project Site

Fire Station	Location	Distance from Site[1]	Estimated Response Time to Site	Equipment	Staffing
Station 72	1688 East 4th Street, Santa Ana, CA 92701	1.6 miles	08:00	-Medic Engine 72	Daily Staffing: -1 Fire Captain; -1 Fire Apparatus Engineer; -2 Firefighters Total Station Staffing: 12 Firefighters
Station 21	1241 Irvine Blvd, Tustin CA 92780	2 miles	08:00	-Battalion 3 -Medic Engine 21	Daily Staffing: -1 Battalion Chief; -1 Fire Captain; -1 Fire Apparatus Engineer; -2 Firefighters Total Station Staffing: 15
Station 70	2301 North Old Grand Street, Santa Ana, CA 92705	1.8 miles	07:30	-Medic Engine 70 -Engine 370	Daily Staffing: -1 Fire Captain; -1 Fire Apparatus Engineer; -2 Firefighters Total Station Staffing: 12 Firefighters
Station 75	120 W Walnut Street, Santa Ana, CA 92701	3.3 miles	13:00	-Medic Engine 75 -Medic Truck 75	Daily Staffing: -2 Fire Captains; -2 Fire Apparatus Engineers; -4 Firefighters Total Station Staffing: 24 Firefighters
Station 8	10631 Skyline Drive, Santa Ana, CA 92705	3.6 miles	11:00	-Medic Engine 8	Daily Staffing: -1 Fire Captain; -1 Fire Apparatus Engineer; -2 Firefighters Total Station Staffing: 12 Firefighters

Source: (Orange County Fire Authority, 2022) (Orange County Fire Authority, 2024)
[1]Measured from approximate center of site

As shown in Table 5.7-2, there were 16,276 incident totals from the three fire stations in the City of Tustin in 2022. Of the calls for service, 70 percent (11,397) were for emergency medical calls, 1.5 percent (237)

were for fire incidents, and 28.5 percent (4,642) were for other incidents, which includes: cancelled service calls, ruptures, hazardous conditions, false alarms, and miscellaneous calls.

According to the Table PS-3, Emergency Service Standards, of the Tustin General Plan, Tustin has a target response time of 5 minutes for 90 percent of incidents related to fire response and basic life support unit responses. The standard response time for the advanced life support unit is 10 minutes for 90 percent of incidents (City of Tustin, 2018).

OCFA's current response standards are based on a 90th Percentile. The OCFA current standard for response is 8:30 minutes at the 90th percentile. Table 5.11-2 provides a summary of service and response metrics for the closest responding stations to the Project site in 2023. According to OCFA, in 2023, OCFA first unit on scene response at the 90th percentile to the project area was 8:35 minutes.

Table 5.7-2: Fire Stations Calls for Service and Response Data – 2023

Fire Station	Total Calls for Services	Emergency Medical Calls	Fire Calls	Other Calls	Total Incidents	90th Percentile Response (min:second)
Station 72	4,470	3,047	80	1,343	4,470	09:00
Station 21	3,780	2,768	38	974	3,780	08:49
Station 70	2,743	1,795	39	909	2,743	08:39
Station 75	4,478	3,316	69	1,093	4,478	08:38
Station 8	805	471	11	323	805	10:31
Total	16,276	11,397	237	4,642	16,276	-

Source: Public Service Letter

5.7.2.3 FIRE PROTECTION SERVICE THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

5.7.2.4 FIRE PROTECTION SERVICE METHODOLOGY

The potential impacts related to fire protection services were evaluated based on the ability of existing fire department staffing, equipment, and facilities to meet the additional demand for fire protection and emergency medical services resulting from implementation of the proposed Project. Impacts are considered significant if implementation of the proposed Project would result in inadequate staffing levels, response times, and/or increased demand for services that would require the construction or expansion of new or altered facilities that might have an adverse physical effect on the environment. For fire services, a significant impact could occur if the proposed Project generated the need for additional personnel or equipment that could not be accommodated within the existing stations and would require the construction of a new station or an expansion of an existing station.

5.7.2.5 FIRE PROTECTION SERVICE ENVIRONMENTAL IMPACTS

IMPACT PS-1: THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED FIRE SERVICE

FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS AND RESPONSE TIMES OR OTHER PERFORMANCE OBJECTIVES FOR FIRE PROTECTION SERVICES.

Less than Significant Impact. The proposed Project is a Housing Overlay (HO) district within Enderle Center site. The HO district will allow residential uses on the Project site, which currently only allows commercial uses. The proposal is regulatory in nature, and a specific development project is not proposed at this time. However, the development that could occur from future buildout of the proposed HO district is 413 dwelling units and 118,474 SF of nonresidential uses. Construction and operation of future residential and nonresidential development as a result of the proposed Project would increase demands for fire protection and emergency medical services beyond the existing site condition. As described in Section 5.6, *Population and Housing*, the proposed Project is estimated to result in 1,189 residents and 365 employees at full buildout. The increased residential and employee population is expected to create the typical range of service calls to OCFA, largely related to medical emergencies. Medical emergencies accounted for 70 percent of service calls of OCFA service calls in in the Project Area during 2023, while fire calls consisted of 1.5 percent of service calls (OCFA 2024).

As described above in Section 4, Environmental Setting, there are five existing fire stations within Tustin, Santa Ana and the unincorporated County that would serve the Project site. The first responding station within the primary responsibility area for the proposed Project (Station 21) is 2 miles from the Project site. The other responding stations include Station 72 located 1.6 miles from the Project site, Station 70 located 1.8 miles from the Project site, Station 75 located 3.3 miles from the Project site, and Station 8 located 3.6 miles from the Project site. The existing 90th percentile on-scene response time for emergency calls from the responding Stations within the Project area is 8:35 minutes, which slightly exceeds the response time standard 90th percentile of 8:30 minutes. The existing 90th percentile response time for emergency calls from Station 21 is 8:49 minutes, which is also slightly above the response time standard.

While a specific development project is not proposed as part of this Project, approval of the Project would allow up to 413 housing units and 118,474 SF of nonresidential space to be developed within the Project site. Therefore, calls for service from the future additional population at the Project site could result in an increase in response times, and result in Station 21 and the other OCFA fire stations further exceeding the existing standards for service, if the calls coincide with other calls for service. However, because the Project site is within four miles of five existing fire stations, and the Project site is within a developed area that is currently served by a first responding station that is 2 miles from the Project site, and a second responding station that is 1.6 miles from the Project site, the Project would not result in the requirement to construct a new fire station.

Additionally, future development as a result of the proposed Project would be developed pursuant to the most recent California building and fire codes, which would improve the fire safety of the Project site compared to the existing buildings. California's building/fire codes are published in their entirety every three years and were most recently updated in 2022. As with all projects within the City, future projects allowed under the proposed Project would be required, per City permitting, to comply with existing regulations, including the 2022 California Fire Code and the OCFA Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development, which include regulations for water supply, built in fire protection systems, adequate emergency access, fire hydrant availability, and fire-safe building materials, such as the following:

- Structures would have automatic fire sprinkler systems per National Fire Protection Association Standard for the Installation of Sprinkler Systems (NFPA 13) as required by the California Building and Fire Codes.

- A fire alarm system would be installed per the requirements of the California Fire Code.
- Access to and around structures would meet OCFA and California Fire Code requirements.
- A water supply system to supply fire hydrants and fire hydrant spacing would meet OCFA and California Fire Code requirements.
- Turning radius and access in and around the Project site and buildings would be designed to accommodate large fire department vehicles and their weight per OCFA Fire Prevention Guideline B-09.
- All electrically operated gates shall install emergency opening devices as approved by the OCFA.
- High rise provisions would be required for buildings over 75 feet high.
- Occupancy permits are required prior to occupancy of any part of the proposed Project.

Overall, with the five existing fire stations within approximately 4 miles of the Project site, and the first responding station 2 miles from the proposed Project, the area has adequate nearby fire facilities to serve the proposed Project in addition to the existing service needs of the area; and construction of a new or expanded fire station would not be required as a result of the proposed Project. Thus, the proposed Project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered fire protection facilities. Overall, impacts related to fire protection services would be less than significant.

Further, funding for fire facilities, equipment, and service personnel come from the City's General Fund. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units and businesses in the City. Therefore, the additional demand for fire services and protection generated by the proposed Project would be satisfied through the General Fund.

5.7.2.6 FIRE PROTECTION SERVICE CUMULATIVE IMPACTS

The geographic context for cumulative fire protection and emergency services is the OCFA service area. Like the proposed Project, cumulative projects in the City would be reviewed by City and OCFA staff prior to permit approval to ensure that the projects implement fire protection design features per the California Building Code and the California Fire Code, which are intended to reduce risk of fire and impacts on fire protection services. Additionally, property and sales tax collected from cumulative projects would increase the City's General Fund in rough proportion to population increases, providing funding for any improvements necessary to maintain adequate fire protection facilities, equipment, and/or personnel. Therefore, cumulative impacts associated with fire services would be less than cumulatively considerable.

5.7.2.7 FIRE PROTECTION SERVICE EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS OR POLICIES

The following standard regulations would reduce potential impacts related to fire protection services:

- OCFA Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development
- Tustin City Code, Chapter 8100; Building and Construction Codes Adopted by Reference

5.7.2.8 FIRE PROTECTION SERVICE LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact PS-1 would be less than significant.

5.7.2.9 FIRE PROTECTION SERVICE MITIGATION MEASURES

No mitigation measures are required.

5.7.2.10 FIRE PROTECTION SERVICE LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to fire protection services would occur.

5.7.3 POLICE SERVICES

5.7.3.1 POLICE SERVICES REGULATORY SETTING

City of Tustin General Plan

The City's General Plan Public Safety Element contains the following goals and policies related to police services.

Goal 6: **Stabilize demand for law enforcement services.**

Policy 6.1: Provide appropriate levels of police protection within the community.

Policy 6.2: Periodically evaluate service levels and service criteria.

Policy 6.3: Pursue State and Federal monies to offset the cost of providing police protection.

Policy 6.4: Cooperate with the Orange County Sheriff's Department and surrounding police departments to provide back-up police assistance in emergency situations.

Policy 6.5: Promote the use of defensible space concepts (site and building lighting, visual observation of open spaces, secured areas, etc.) in project design to enhance public safety.

Policy 6.6: Enhance public awareness and participation in crime prevention by developing new, and expanding existing, educational programs dealing with personal safety awareness, such as neighborhood watch, commercial association programs, and community-oriented policing.

5.7.3.2 POLICE SERVICES ENVIRONMENTAL SETTING

The Tustin Police Department provides police services throughout the City. Police Department headquarters are southeast of the Project site, at 300 Centennial Way, Tustin, CA 92780, which is approximately 1.7 roadway miles southeast from the Project site.

As of May 2024, the Tustin Police Department has 83 full time Sworn Police Officers, 7 part time Sworn Officers, 44 full time civilian support personnel and 12 part time civilian support personnel. According to the California Department of Finance, the City of Tustin had a population of 78,559 residents in 2023 (California Department of Finance, 2023). Based on this population estimate, the City's sworn officer to population ratio is 1.1 officers per 1,000 population.

Police Department Performance Standards

According to the Table PS-3, Emergency Service Standards, of the Tustin General Plan, the Tustin Police Department has a target response time of 3.5 minutes for emergency calls and 13 minutes for non-emergency calls (City of Tustin, 2018).

Tustin Police Department groups calls for service into four priority categories, described below.

- Priority 1: Immediate threat to life or significant threat to public safety. Priority 1 calls are dispatched immediately.
- Priority 2: Crimes in progress or other calls for service with a potential threat to public safety that do not rise to the level of a Priority 1 call. These calls are dispatched as soon as possible.
- Priority 3: Calls for service with a reporting party who is waiting for an officer.
- Priority 4: Report calls with a delay in reporting and limited suspect information.

Average response times for each call type between January 1, 2023, to December 31, 2023, City wide are provided below.

- Priority 1 – 00:05:43
- Priority 2 – 00:14:25
- Priority 3 – 00:42:27
- Priority 4 – 00:53:36

5.7.3.3 POLICE SERVICES THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered police department facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for police services.

5.7.3.4 POLICE SERVICES METHODOLOGY

The potential impacts related to police services were evaluated based on the ability of existing and planned Police Department staffing, equipment, and facilities to meet the additional demand for police services resulting from implementation of the proposed Project. Impacts are considered significant if implementation of the proposed Project would result in inadequate staffing levels, response times, and/or increased demand for services that would require the construction or expansion of new or altered facilities that might have an adverse physical effect on the environment. For police services, a significant impact could occur if the proposed Project generated the need for additional personnel or equipment that could not be accommodated within the existing station and substations and would require the construction of a new station or an expansion of an existing station.

5.7.3.5 POLICE SERVICES ENVIRONMENTAL IMPACTS

IMPACT PS-2 THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED POLICE SERVICE FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS AND RESPONSE TIMES OR OTHER PERFORMANCE OBJECTIVES FOR POLICE SERVICES.

Less than Significant Impact. The proposed Project is a Housing Overlay (HO) district within the Enderle Center site. The HO district will allow residential uses on the Project site, which currently only allows commercial uses. The proposal is regulatory in nature, and a specific development project is not proposed at this time. However, the development that could occur from future buildout of the proposed HOD is 413 dwelling units and 118,474 SF of nonresidential uses. Construction and operation of future residential and nonresidential development as a result of the proposed Project would increase demands for police protection services beyond the existing site condition. As described in Section 5.6, *Population and Housing*, the proposed Project is estimated to result in 1,189 residents and 365 employees at full buildout. This residential and employee population is expected to create the typical range of police service calls.

Crime and safety issues during Project construction may include theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism. During operation, the proposed Project is anticipated to generate a typical range of police service calls, such as vehicle burglaries, residential thefts, commercial shoplifting, and disturbances. Additionally, future applicants would be required to coordinate with the Tustin Police Department prior to project approval to ensure that adequate security precautions and design features are in place.

Based on the City's current ratio of officers to residents (1.1 officers per 1,000), future buildout of the proposed Project would result in the need for one additional police officer (1,189/1,000 x 1.1 = 1.31). Although future buildout of the proposed Project would incrementally increase the demand for City police protection services, this demand would not be expected to require the construction of new facilities or the expansion of existing facilities.

The Police Department's operating budget and expansion of facilities, personnel, and equipment is from the City's General Fund. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units and businesses in the City. Tustin Police Department would continue to add staff and equipment on an as-needed basis to accommodate the incrementally increasing demands from future development, including the proposed Project. Therefore, the additional demand for police services and protection generated by the proposed Project would be satisfied through the General Fund. Therefore, impacts would be less than significant.

5.7.3.6 POLICE SERVICES CUMULATIVE IMPACTS

The geographic area for cumulative analysis of police services is the service territory for Tustin Police Department. The Police Department's operating budget is primarily generated through tax revenues and fees collected from penalties and requested services. Increased property and sales tax from cumulative projects would increase the City's General Fund in rough proportion to population increases, providing funding for any improvements necessary to maintain adequate police protection facilities, equipment, and/or personnel. Consequently, although the cumulative demand for police services would incrementally increase over time, the addition of new officers and equipment to serve the demand is not likely to result in any significant adverse cumulative impacts associated with the construction of new facilities or the alteration of existing facilities. Further, should any new or altered facilities be required in the future, these facilities would be subject to separate CEQA review. Therefore, cumulative impacts associated with police services would be less than significant.

5.7.3.7 POLICE SERVICES EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS OR POLICIES

There are no applicable regulations related to police services that would reduce potential impacts.

5.7.3.8 POLICE SERVICES LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact PS-2 would be less than significant.

5.7.3.9 POLICE SERVICES MITIGATION MEASURES

No mitigation measures are required.

5.7.3.10 POLICE SERVICES LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to police services would occur.

5.7.4 SCHOOL SERVICES

5.7.4.1 SCHOOL SERVICES REGULATORY SETTING

California State Assembly Bill 2926: School Facilities Act of 1986

In 1986, AB 2926 was enacted to authorize the levy of statutory fees on new residential and commercial/industrial development in order to pay for school facilities. AB 2926 was expanded and revised in 1987 through the passage of AB 1600, which added Sections 66000 et seq. to the Government Code. Under this statute, payment of statutory fees by developers serves as CEQA mitigation to satisfy the impact of development on school facilities.

California Senate Bill 50

The passage of SB 50 in 1998 defined the needs analysis process that is codified in Government Code Sections 65995.5 through 65998. Under the provisions of SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. Level I fees are assessed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level II fees require the developer to provide one-half of the costs of accommodating students in new schools, and the state provides the other half. Level III fees require the developer to pay the full cost of accommodating the students in new schools and are implemented at the time the funds available from Proposition 1A (approved by the voters in 1998) are expended. School districts must demonstrate to the state their long-term facilities needs and costs based on long-term population growth in order to qualify for this source of funding.

City of Tustin General Plan

The City's General Plan Land Use Element contains the following goals and policies related to school services.

Goal 8: **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

Policy 8.1: Encourage within economic capabilities, a wide range of accessible public facilities and community services including fire and police protection, flood control and drainage, educational, cultural and recreational opportunities and other governmental and municipal services. Senate Bill (SB) 50, adopted in 1998, prohibits the City from using the inadequacy of school facilities as a basis for denying or conditioning the development of property. SB

50, however, gave school districts new authority to raise school impact mitigation fees. In addition, the voters passed Proposition 1A in November 1998, which provides $9.2 billion dollars in bonds to construct new or expand existing schools. In summary, school districts have the financial means and legal authority to respond to new development.

Goal 9: Continue to provide for a planned community in East Tustin compatible with the land use characteristics of the local area and sensitive to the natural environment.

Policy 9.2: Provide for supporting land uses in East Tustin, including neighborhood commercial centers, park and recreational facilities, and schools, to serve the residential community.

5.7.4.2 SCHOOL SERVICES ENVIRONMENTAL SETTING

The Project site is located within the Tustin Unified School District (TUSD) boundary, which includes the City of Tustin, portions of the City of Irvine, and portions of unincorporated areas of Orange County. TUSD has a total of 29 schools including: 16 elementary schools, two Kindergarten through 8th-grade schools, one Kindergarten through 12th-grade online school, four middle schools, one 6th-grade through 12th-grade academy, four high schools, and one adult education school.

According to the data from California Department of Education, TUSD has an enrollment of 21,830 students in the 2022/2023 school year (California Department of Education, 2024). The Project site is in the attendance areas of Guin Foss Elementary School (18492 Vanderlip Ave), which is approximately 1.3 roadway miles and 1.0 linear miles from the Project site; Columbus Tustin Middle School (17952 Beneta Way), which is approximately 1.1 roadway miles and 0.7 linear miles from the Project site; and Foothill High School (19251 Dodge Ave), which is approximately 2.2 roadway and 1.7 linear miles from the Project site (PowerSchool, 2024). Table 5.7-3 shows the total capacity, the 2022-2023 school year enrollments, and the remaining capacity of the schools that would serve students residing on the Project site. As shown on Table 5.7-3, Guin Foss Elementary School does not have remaining capacity to serve additional students, while Columbus Tustin Middle School and Foothill High School both have remaining capacity to serve approximately 177 and 44 additional students, respectively.

Table 5.7-3: Existing School Capacity of Schools Serving the Project Site

School	2023/2024 Capacity	2022/2023 Enrollment	Remaining Capacity
Guin Foss Elementary School (K-5)	389	416	-27
Columbus Tustin Middle School (6-8)	781	604	177
Foothill High School (9-12)	2,232	2,188	44
Total	**3,402**	**3,208**	**-194**

Source: (Special District Financing & Administration, April 2024)

5.7.4.3 SCHOOL SERVICES THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for school services.

5.7.4.4 SCHOOL SERVICES METHODOLOGY

The potential impacts related to school services were evaluated based on the ability of existing and planned schools to accommodate the student population that would be generated by the proposed Project. Specifically, impacts on schools are determined by analyzing the estimated increase in student population as a result of Project build out, and comparing the increase to the capacity of schools that would serve the Project site, which determines whether new or altered facilities would be required, the construction of which could result in adverse environmental effects.

As described in the TUSD Fee Justification Report for Residential and Commercial/Industrial Development, school districts anticipate the number of students that would be generated by new residential development to plan for needed facilities. The generation rates used by the TUSD are listed in Table 5.7-4.

Table 5.7-4: Tustin Unified School District Student Generation Rates

School Type	Generation Rate (All Dwelling Types)
Elementary School (K–5)	0.1602
Intermediate School (6–8)	0.0906
High School (9–12)	0.1208

Source: (Special District Financing & Administration, April 2024)

5.7.4.5 SCHOOL SERVICE ENVIRONMENTAL IMPACTS

IMPACT PS-3 THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED SCHOOL FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

Less than Significant Impact. The proposed Project is a rezone within the Enderle Center site. A specific development project is not proposed as part of this Project. The proposed HO district will allow residential uses on the Project site, which currently only allows commercial uses. However, the development that could occur from future buildout of the proposed Housing Overlay is 413 dwelling units and 118,474 SF of nonresidential uses. Future buildout of the Project would provide housing for families that may have school children. As shown in Table 5.11-5, based on the TUSD student generation rates, the proposed Project would result in 66 elementary students, 37 intermediate students, and 50 high school students, which would total 153 students at Project buildout. The student population would account for approximately 13 percent of the total 1,189 residents at full occupancy.

Table 5.7-5: Students at Project Buildout

School Type	Generation Rate (All Dwelling Types)	Dwelling Units	Project Generated Students
Elementary School (K–5)	0.1602	413	66
Intermediate School (6–8)	0.0906	413	37
High School (9–12)	0.1208	413	50
Total Students			**153**

Source: (Special District Financing & Administration, April 2024)

As shown in Table 5.7-6, at buildout of the proposed Project, Guin Foss Elementary and Foothill High School would be over-capacity and additional or expanded facilities may be needed, while Columbus Tustin Middle

School would retain additional capacity for future students. A service letter was sent to TUSD requesting information regarding the District's ability to service the Project. On April 12, 2024, Tom Rizzuti, Director of Facilities and Planning, responded stating TUSD has no current plans to build new schools in the District. Additionally, the response stated that the District reserves the right to send students generated by the Project to other schools in the District if space is not available at the current schools of attendance. Thus, although two of the schools serving the Project site are over capacity, the District could send students generated by the Project to other schools within the District that have capacity to accommodate additional students.

Table 5.7-6: Remaining School Capacity with Buildout of the Proposed Project

School	2023/2024 Capacity	2022/2023 Enrollment	Remaining Capacity	Project Generated Students	Remaining Capacity with Project
Guin Foss Elementary School (K-5)	389	396	-27	67	-94
Columbus Tustin Middle School (6-8)	781	609	177	38	139
Foothill High School (9-12)	2,232	2,276	44	50	-6

Source: (Special District Financing & Administration, April 2024) (California Department of Education, 2024)

As described within the Regulatory Setting, the need for additional school facilities is addressed through compliance with school impact fee assessment. SB 50 (Chapter 407 of Statutes of 1998) sets forth a state school facilities construction program that includes restrictions on a local jurisdiction's ability to condition a project on mitigation of a project's impacts on school facilities in excess of fees set forth in the Government Code. These fees are collected by school districts at the time of issuance of building permits for commercial, industrial, and residential projects. The existing TUSD development impact fee is $4.08 per square foot for all new residential development, and $0.66 per square foot for new commercial development. Effective June 21, 2024, the development impact fee for residential development will be %5,17 per square foot and $0.48 per square foot for commercial development (Tustin Unified School District, 2024). Pursuant to Government Code Section 65995, applicants pay developer fees to the appropriate school districts at the time building permits are issued; and payment of the adopted fees provides full and complete mitigation of school impacts. As a result, impacts related to school facilities would be less than significant with the Government Code-required fee payments.

5.7.4.6 SCHOOL SERVICES CUMULATIVE IMPACTS

The geographic context for cumulative impacts to schools is the TUSD boundaries. The proposed Project and other development within TUSD could generate additional students resulting in the need to expand or construct new schools. As described above, at buildout, the proposed Project could generate approximately 153 additional students. Some of these students would be accommodated by the existing schools with additional capacity. However, some students would be transferred by the District into other schools within TUSD that have additional capacity.

The attendance boundaries of Guin Foss Elementary School, Columbus Tustin Middle School, and Foothill High School include areas anticipating several residential development projects that are anticipated to generate additional students within the attendance boundaries of these schools. Thus, the proposed Project in combination with related projects would result in the exceedance of capacity at a minimum of two school facilities, therefore Guin Foss Elementary and Foothill High School may be over capacity with implementation of the proposed Project in combination with related projects.

However, as described above, the state provided authority for school districts to assess impact fees for both residential and non-residential development projects. Fees collected in accordance with Government Code

Section 65995(b) allow TUSD to plan and construct for future growth. Furthermore, the payment of those fees constitutes full mitigation for the impacts generated by new development, per Government Code Section 65995, which would reduce potential impacts related to the projects cumulative school service impacts to a less than significant level.

5.7.4.7 SCHOOL SERVICES EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS OR POLICIES

- Government Code Section 65995(b)

5.7.4.8 SCHOOL SERVICES LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact PS-3 would be less than significant.

5.7.4.9 SCHOOL SERVICES MITIGATION MEASURES

No mitigation measures are required.

5.7.4.10 SCHOOL SERVICES LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to school services would occur.

5.7.5 LIBRARY SERVICES

5.7.5.1 LIBRARY SERVICES REGULATORY SETTING

There are no federal, state, or local regulations related to library services.

5.7.5.2 LIBRARY SERVICES ENVIRONMENTAL SETTING

The Orange County Public Library (OCPL) provides library services to the City, including the Project site. OCPL has 33 branch libraries in 24 incorporated cities and unincorporated areas of Orange County and has a system-wide collection of approximately 2.5 million items (Orange County Public Libraries, 2020). The City of Tustin has one branch library operated by OCPL: the Tustin Library, located at 345 East Main Street, approximately 1.7 roadway miles southeast of the Project site.

The Tustin Library branch has amenities such as public computers with internet access, a Memory Lab for library users to digitize their own documents, a local history collection featuring books specific to the Tustin community and surrounding area and OC Read. OC Read is a program designed to support adult learners to further their work, family, and personal goals.

OCPL has a service standard of 0.2 SF of library facility per capita for the purpose of projecting the need for additional library services (Orange County, 2020).

5.7.5.3 LIBRARY SERVICES THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of a new or physically altered library facility, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for library services.

5.7.5.4 LIBRARY SERVICES METHODOLOGY

The potential impacts related to library services were evaluated based on the ability of existing and planned libraries to accommodate the population that would be generated by the proposed Project. Specifically, impacts on libraries are determined by identifying the extent to which the Project would increase demand for services and analyzing the estimated increase in capacity of libraries that would serve the Project site to determine whether new or altered facilities would be required, the construction of which could result in adverse environmental effects.

The potential impacts related to libraries are considered in the context of the capacity and use of existing libraries. Due to the wide availability of information online, library usage has been declining in recent years and library service needs are changing with increasing resources being available online and the availability of high-speed internet services. As a result, library service standards (e.g., a certain number of volumes or SF of building space per thousand residents) are no longer appropriate when assessing the needs of a municipal library. A more appropriate standard is related to the physical usage of the library facility in relation to its physical capacity.

Commercial and employment-generating land uses do not typically generate a demand for library services. As such, the analysis of impacts on library services is based on the number of residents generated by the proposed Project and their anticipated usage of library facilities.

5.7.5.5 LIBRARY SERVICES ENVIRONMENTAL IMPACTS

IMPACT PS-4 THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED LIBRARY FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

Less than Significant Impact. The proposed Project is a Housing Overlay (HO) district within the Enderle Center site. The HO district will allow residential uses on the Project site, which currently only allows commercial uses. The proposal is regulatory in nature, and a specific development project is not proposed at this time. However, the development that could occur from future buildout of the proposed HOD is 413 dwelling units and 118,474 SF of nonresidential uses. As described in Chapter 5.6, Population and Housing, buildout of the Project could result in an additional 1,189 residents in the City and 365 employees. This increase in population would increase the demand for library services in the City. Based on OCPL's service standards of 0.2 square feet of library space per capita, the Project would require approximately 518 SF of library space. Funding for OCPL services is provided through County property taxes dedicated to the library. These funds would be used to upgrade and expand existing facilities, as needed (The Davis Company, 2010). Project impacts are anticipated to be adequately funded by an increase in tax revenue, over an extended period of time, relative to the increase in development intensity. Therefore, future buildout of the proposed Project would not result in the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts. Therefore, impacts to library services would be less than significant.

5.7.5.6 LIBRARY SERVICES CUMULATIVE IMPACTS

The geographic scope for cumulative library services is the OCPL service area. Future development of the proposed Project and cumulative projects would proportionally contribute to property taxes, a portion of which would be dedicated to OCPL services. Cumulative projects could introduce residents into OCPL's service area and increase demand for library services. However, all projects in the County would contribute towards County property taxes that fund OCPL services throughout the County. These funds would be utilized to upgrade and expand existing and/or planned library facilities and resources, as needed. Further, should

any new or altered facilities be required in the future, these facilities would be subject to separate CEQA review. Therefore, impacts from cumulative impacts associated with library services would be less than significant.

5.7.5.7 LIBRARY SERVICES EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS OR POLICIES

- Government Code Section 65995(b)

5.7.5.8 LIBRARY SERVICES LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact PS-4 would be less than significant.

5.7.5.9 LIBRARY SERVICES MITIGATION MEASURES

No mitigation measures are required.

5.7.5.10 LIBRARY SERVICES LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to library services would occur.

5.7.6 REFERENCES

California Department of Education. (2023). *2022-23 Enrollment by Grade Tustin Unified Report (30-73643)*. Retrieved from Data Quest: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=3073643&agglevel=district&year=2022-23

California Department of Education. (2024). *Data Quest*. Retrieved from 2022-23 Enrollment by Grade: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=3073643&agglevel=district&year=2022-23

City of Tustin. (2018). *City of Tustin General Plan*.

City of Tustin. (2019, February 13). *About Us*. Retrieved from Tustin Police: https://www.tustinca.org/177/About-Us

Orange County Fire Authority 2022 Statistical Annual Report. Accessed: https://ocfa.org/Uploads/Transparency/OCFA%20Annual%20Report%202022.pdf202022202018

Orange County. (2020). *General Plan Public Services and Facilities Element*. Retrieved from Orange County Development Services: https://ocds.ocpublicworks.com/service-areas/oc-development-services/planning-development/codes-and-regulations/general-plan

Orange County Fire Authority. (2022). *Fire Stations*. Retrieved from Orange County Fire Authority: https://www.ocfa.org/AboutUs/FireStations.aspx

Orange County Fire Authority. (2024). *Operations*. Retrieved from Orange County Fire Authority: https://ocfa.org/AboutUs/Departments/Operations.aspx

Orange County Public Libraries. (2020). *Libraries*. Retrieved from Orange County Public Libraries: https://www.ocpl.org/libraries

PowerSchool. (2024). *Tustin Unified School District.* Retrieved from MySchool Locator: https://locator.pea.powerschool.com/?StudyID=215986

Special District Financing & Administration. (April 2024). *Tustin Unified School District Fee Justification Report for Residential & Commerical/Industrial Development.*

SCAG Final 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy, "Connect SoCal 2024". Accessed: https://scag.ca.gov/connect-socal

The Davis Company. (2010). *Orange County Public Libraries Facilities and Financing Study.*

Tustin Unified School District. (2024). *Developer Fees.* Retrieved from https://www.tustin.k12.ca.us/departments/business-services/fiscal-services/developer-fees

This page intentionally left blank.

5.8 Recreation

5.8.1 INTRODUCTION

Pursuant to the requirements of CEQA, this section of the EIR analyzes whether the proposed Project would (1) increase the use of existing parks and recreational facilities such that substantial physical deterioration or degradation of the facilities would occur or be accelerated or that new or expanded facilities would be required; or (2) result in substantial adverse construction-related effects associated with the provision of new or physically altered parks and recreational facilities, whether onsite or offsite. Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022
- *Tustin City Code*

New housing can result in substantial population growth and the need for additional park and recreation facilities. Because CEQA focuses on physical environmental effects, this section analyzes whether any physical changes resulting from an increase in demands for park and recreation facilities from the proposed Project could result in significant adverse environmental effects. Thus, an increase in use of parks and recreation facilities would not, by itself, be considered a physical change in the environment. However, physical changes in the environment resulting from the construction of new facilities or an expansion of existing facilities to accommodate the increased staff or equipment needs related to substantial physical deterioration could constitute a significant impact. The proposed Project has also been evaluated to determine its consistency with the City's zoning code provisions related to the provision of park and recreation facilities.

5.8.2 REGULATORY SETTING

5.8.2.1 Federal Regulations

There are no federal regulations related to recreation that are applicable to the Project.

5.8.2.2 State Regulations

Mitigation Fee Act

The California Mitigation Fee Act, Government Code Sections 66000, et seq., allows cities to establish fees to be imposed upon development projects for the purpose of mitigating the impact that the development projects have upon a city's ability to provide specified public facilities. To comply with the Mitigation Fee Act, a city must follow four primary requirements:

1. Make certain determinations regarding the purpose and use of a fee and establish a nexus or connection between a development project or class of project and the public improvement being financed with the fee;
2. Segregate fee revenue from the General Fund in order to avoid commingling of capital facilities fees and general funds;
3. For fees that have been in the possession of the city for five years or more and for which the dollars have not been spent or committed to a project the city must make findings each fiscal year describing the continuing need for the money; and
4. Refund any fees with interest for developer deposits for which the findings noted above cannot be made.

As described below, the City of Tustin has adopted a parkland dedication and/or in-lieu fee that is included in Tustin City Code Section 9331(d).

5.8.2.3 Local and Regional Regulations

General Plan

The Conservation, Open Space, and Recreation Element of the City's General Plan includes the following goals and policies that are relevant to the proposed Project:

Goal 1: **Reduce air pollution through proper land use, transportation and energy use planning**

Policy 1.4: Develop neighborhood parks near concentrations of residents to encourage pedestrian travel to the recreation facilities.

Goal 14: **Encourage the development and maintenance of a balanced system of public and private parks, recreation facilities, and open spaces that serves the needs of existing and future residents in the City of Tustin.**

Policy 14.1: Provide Tustin with a full range of recreational and leisure opportunities that reflect the community's current and future population size and demographic character.

Policy 14.2: Design new and renovated parks for convenient and accessible use by the disabled, elderly, and otherwise less mobile persons within the community.

Policy 14.5: Coordinate with the Tustin Unified School District and other public and quasi-public agencies for the maximum feasible use of public facilities to meet recreational needs.

Policy 14.6: Encourage all future public neighborhood and community parks in the City to be designed as joint-use facilities contiguous with public schools and sharing playfields, playgrounds, and other amenities wherever possible.

Policy 14.7: Require the incorporation and maintenance of open space areas which are located within and primarily benefit particular subdivisions to be a financial responsibility of the benefitting property owners.

Policy 14.8: Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.

Policy 14.12: Ensure that the City's laws and related implementation tools relating to park dedication and development (e.g., ordinances, regulations, in-lieu fee schedules, etc.) reflect current land and construction costs, and are, in fact, providing adequate park land and facilities concurrent with population growth.

Goal 17: **Operate and maintain existing and future parks and recreation facilities so they are safe, clean, and attractive to the public; and preserve, protect, and enhance both existing and potential natural recreation areas to ensure that long-term public investments and values are not unreasonably preempted, compromised, or prevented by neglect or short-term considerations.**

Policy 17.2: Require park designs (including landscape treatments, buildings, irrigation, etc.) that are durable, reasonably standardized, and economical to maintain.

Tustin City Code

Article 9, Chapter 3, Part 3, Section 9331(d) of the Tustin City Code discusses parkland dedications and development fees for subdivisions. To adhere to the policies and standards for parks and recreational facilities set forth in the General Plan Conservation/ Open Space/ Recreation Element, project proponents may dedicate land or pay a fee in lieu or a combination of both. A park fee is required when: (1) there is no public park or recreational facility required within the proposed subdivision; (2) the subdivision is less than 50 parcels; or (3) the project is a conversion of an existing apartment complex to multiple-owner occupancy. For subdivisions of 50 parcels or less, a project proponent may pay a fee in lieu of land dedication. The Tustin City Code permits the voluntary dedication of land for park and recreation purposes in subdivisions of 50 parcels or less. Dedication of land may be required by the City for a condominium, stock cooperative, or community apartment project that exceeds 50 dwelling units, regardless of the number of parcels. The land and fees must be used "only for the purpose of providing park and recreational facilities to serve the area from which received, and the location of the land and amount of fees shall bear a reasonable relationship to the use of the park and recreational facilities by the future inhabitants of the subdivision, the community, and the general area from which it is received."

5.8.3 ENVIRONMENTAL SETTING

According to the City's General Plan, in 2011, the City had 113 acres of existing local and community parks, but needed an additional 114 acres to serve its population based on a standard of 3 acres per 1,000 persons and the January 2011 City population of 75,781 (City of Tustin, 2018). According to the City Parks and Recreation Director, the City of Tustin currently has 183.2[1] acres of parkland (C. Clanton, personal communication, 2024 March 18). As discussed in Section 5.6, *Population and Housing,* of this Draft EIR, the City had a population of 77,558 in 2023. Therefore, the City has approximately 2.36 acres of public park and/or recreational space per 1,000 residents. Thus, the City of Tustin is currently parkland deficient and is not meeting its standard of 3 acres of parkland per 1,000 residents. However, the City is currently in the design phase for a new joint-use park at Heideman School (15571 Williams Street) that is expected to be completed in 2026 that will contribute to the City's existing parkland.

There are no existing parks within the Project site. The closest existing park and recreation facilities to the Project site (within 2 miles) in the City of Tustin are listed in Table 5.8-1. As shown, the City currently has two existing parks that provide 20.4 acres of parkland within 2 miles of the Project site.

Table 5.8-1: Tustin Park Facilities within 2 Miles of the Project Site

Park Name and Address	Amenities	Park Acreage	Distance from Project Site	Travel Time from Project Site[1]
Columbus Tustin Park	ADA Accessible, Baseball / Softball Diamond, BBQs (2), Bocce Ball Court, Horseshoe Pit, Large Turf Area, Parking, Picnic Areas, Picnic Shelter, Picnic Tables (3 Tables), Playground, Restrooms	13.9 acres	1.2 miles	Walking: 25 mins Driving: 3 mins
Peppertree Park	ADA Accessible, Baseball / Softball Diamond, BBQs (2), Bocce Ball Court, Horseshoe Pit, Large Turf Area, Parking, Picnic Areas, Picnic Shelter, Picnic Tables (3 Tables), Playground, Restrooms	6.5 acres	1.2 miles	Walking: 27 mins Driving: 4 mins

Notes: [1]Estimates per Google Maps
Source: (City of Tustin, 2019)

[1] Note: This total includes Linear Park at Tustin Legacy which has not yet been constructed but has been set for future development.

5.8.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

REC-1 Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

REC-2 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

5.8.5 METHODOLOGY

The analysis below considers the increase in use of parks and recreation facilities that would be generated by the proposed Project in relation to the ability of existing park and recreation facilities to accommodate the increased use. The analysis considers whether an increase in use would result in the substantial physical deterioration of existing recreational facilities, such as accelerated wear on sports facilities and fields, or in the need for new or expanded facilities.

The analysis uses a parkland-to-population ratio to measure demand for recreational facilities that is based upon the City's General Plan policy to attain 3 acres of park and recreation facilities per 1,000 residents. The EIR evaluates the amount of recreational use areas that would be required by the proposed Project and the extent of increased usage of existing parks and recreational facilities that might result in the substantial physical deterioration of existing recreational facilities.

5.8.6 ENVIRONMENTAL IMPACTS

IMPACT REC-1: THE PROJECT WOULD NOT INCREASE THE USE OF EXISTING NEIGHBORHOOD AND REGIONAL PARKS OR OTHER RECREATIONAL FACILITIES SUCH THAT SUBSTANTIAL PHYSICAL DETERIORATION OF THE FACILITY WOULD OCCUR OR BE ACCELERATED.

Less than Significant.

The Project involves the implementation of a Housing Overlay (HO) district, which would allow for 7 acres of the Project site to be developed with residential uses. A specific development project is not proposed as part of the Project. However, implementation of the proposed Project would permit the development of 413 residential units within the Project site. In addition, there is a remaining development potential of 118,474 SF of nonresidential uses. The proposed Project would not directly affect park and recreational facilities; however, it would increase the allowed residential density of the Project site, which in turn may result in an increased number of residents who would use the existing parks and contribute to the cumulative demand for regional and local parks and recreational facilities and services in Tustin.

As described in Section 5.8.3, *Environmental Setting*, as of March 2024, the City had a total of 183.2 acres of parkland, or approximately 2.36 acres of parkland per 1,000 residents. Thus, the City is currently parkland deficient and is not meeting its City standard of 3 acres per 1,000 residents. As described in Section 5.6, *Population and Housing*, the Project is anticipated to result in 1,189 residents at full buildout. This increase in residents could in turn increase demand for park and recreational facilities. Using the City's standard of 3 acres of parkland for every 1,000 residents, the proposed Project would result in a demand for approximately 3.57 additional acres of parkland to support the additional residents. Therefore, the proposed Project would exacerbate the City's parkland deficiency. However, future implementation of development projects would be required to determine their fair share of park facilities and either provide adequate park facilities or pay in lieu fees in accordance with Tustin City Code (Article 9, Chapter 3, Part 3, Section 9331) (PPP R-1).

Additionally, as listed in Table 5.8-1, there are 20.4 acres of parkland within 2 miles of the Project site available for use by the proposed residents. Further, there is also an abundance of existing recreational facilities within the region, such as Peters Canyon Regional Park, Santiago Canyon, and Crystal Cove State Park, that would be available for use by future residents. Therefore, due to the limited increase of residents that would occur from implementation of the proposed Project and the amount of available park space within the vicinity of the Project site, future residents are not anticipated to increase the use of existing parks and recreation facilities such that substantial physical deterioration of such parks and facilities would occur. Therefore, impacts would be less than significant.

IMPACT REC-2: THE PROJECT WOULD NOT INCLUDE RECREATIONAL FACILITIES OR REQUIRE THE CONSTRUCTION OR EXPANSION OF RECREATIONAL FACILITIES WHICH MIGHT HAVE AN ADVERSE PHYSICAL EFFECT ON THE ENVIRONMENT.

Less than Significant.

As discussed above, the Project involves the implementation of a Housing Overlay (HO) district, which would allow for 7 acres of the Project site to be developed with residential uses. The Project does not include the construction or expansion of parks. As described above, implementation of future developments allowed by the proposed Project may increase the population by approximately 1,189 persons, resulting in the need for approximately 3.57 more acres of parkland to serve the future population. However, future implementation of development projects would be required to determine park needs and to pay development fees to contribute to the construction or expansion of recreational facilities. Should new facilities be required as a result of new development within the Project site, these new developments would pay an impact fee to the City pursuant to Tustin City Code Section 9331 (PPP R-1). Any new or expanded facilities would be constructed by the City, since they are the responsible party that acquires, constructs, and maintains new parks and recreation areas. Thus, the Project would have less-than-significant impacts on the construction or expansion of recreational facilities or services.

5.8.7 CUMULATIVE IMPACTS

The cumulative area of recreation impacts for the proposed Project includes the City of Tustin. As detailed previously, the City currently has approximately 2.36 acres of public park and/or recreational space per every 1,000 residents, which is below the City's parkland standard of 3 acres of parkland per 1,000 residents. Based on 3 acres of public park and/or recreational space per 1,000 residents, buildout of the proposed Project results in a need for approximately 3.57 acres of parkland to serve the 1,189 new residents of the Project site. However, implementation of future development projects would be required to determine their fair share of park facilities, and either provide adequate park facilities or pay in lieu fees, in accordance with Tustin City Code Section 9331 (PPP R-1). Although there is currently a deficit of improved City park space, all future proposed Project and cumulative projects would be required to provide park and recreational facilities and/or pay in-lieu fees as required by the Tustin City Code, as described in the General Plan and City Code. Therefore, the proposed Project's impacts related to the amount of parkland within the City would not result in a cumulatively considerable impact related to parks and recreational facilities.

5.8.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

California Code Sections 66000 (Mitigation Fee Act)

Plans, Programs, or Policies

PPP R-1: City Park Requirements. Tustin City Code Section 9331 – Dedications, Reservations and Development Fees. All future development shall be consistent with this standard.

5.8.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact REC-1 and Impact REC-2 would be less than significant.

5.8.10 MITIGATION MEASURES

5.8.11 NO MITIGATION MEASURES ARE REQUIRED FOR THE PROPOSED PROJECT. LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to recreation would occur.

5.8.12 REFERENCES

City of Tustin. (2018). *City of Tustin General Plan.*

City of Tustin. (2019). *Parks Information.* Retrieved from Tustin Parks and Recreation: https://www.tustinca.org/715/Parks-Information

5.9 Transportation

5.9.1 INTRODUCTION

This section addresses potential transportation impacts that may result from implementation of the proposed Project. The following discussion addresses the existing transportation conditions in the Project area, identifies applicable regulations, evaluates the proposed Project's consistency with applicable goals and policies, identifies and analyzes environmental impacts, and, if necessary, recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project. This analysis has been prepared in accordance with CEQA requirements to evaluate potential transportation impacts based on vehicle miles traveled (VMT). Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018, updated October 2022.
- *Tustin City Code*.
- *Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), adopted April 2024.
- *Enderle Center Rezone Project Vehicle Miles Traveled (VMT) Analysis*, prepared by EPD Solutions, May 2024 (Appendix D).

Transportation Terminology

- **Major:** A six- to seven-lane divided roadway with no on-street parking, with a typical right-of-way width of 120 to 144 feet and a curb-to-curb pavement width of 102 to 126 feet. Major arterials typically carry a significant volume of regional traffic. When the traffic volumes warrant a major arterial highway in areas where a full 120 to 144 feet of right-of-way is not feasible due to existing structures or topography, a lesser right-of-way (no less than 100 feet) can be used to accommodate a six-lane facility. This is referred to as a "modified major" on the City Arterial Highway Plan.
- **Primary:** A four-lane divided roadway, with a typical right-of-way width of 100 feet and curb-to-curb pavement width of 84 feet. Regional traffic will typically be less than for a major arterial, but primary arterials form an important component of the regional transportation system. When the traffic volumes warrant a primary arterial highway in areas where a full 100 feet of right-of-way is not feasible due to existing structures or topography, a lesser right-of-way (no less than 80 feet) can be used to accommodate a four-lane facility. This is referred to as a "modified primary" on the City Arterial Highway Plan.
- **Secondary:** A four-lane undivided roadway, with a typical right-of-way width of 80 feet and a curb-to-curb pavement width of 64 feet. These roadways serve as collectors, distributing traffic between local streets, and major and primary arterials.
- **Collector:** A two-lane undivided roadway, with a minimum right-of-way width of 66 feet and a minimum curb-to-curb width of 50 feet. The width may be increased to accommodate roadway features such as bicycle lanes, on-street parking, and turn lanes. At level of service (LOS) "C," this road type accommodates up to approximately 10,000 vehicle trips per day. This road functions as a collector facility, however it tends to move traffic between two arterials rather than between local streets, it has been added to the City's arterial highway system because it provides network continuity and is regionally significant and may serve through traffic demand where projected volumes do not warrant a higher classification such as Secondary.
- **Divided Collector:** A two-lane, two-way divided roadway, with a minimum right-of-way width of 80 feet and a minimum curb-to-curb width of 56 feet including on-street parking and bike lanes. The width

may be decreased when no parking spaces are provided or increased to accommodate roadway features such as turn lanes. At LOS "C," this road type accommodates up to approximately 15,000 vehicle trips per day. Similar to Collectors, this road functions as a collector facility, however it tends to move traffic between two arterials rather than between local streets, it has been added to the City's arterial highway system because it provides network continuity and is regionally significant and may serve through traffic demand where projected volumes do not warrant a higher classification such as Secondary.

- **Class I Bike Path or Bike Trail.** Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians; crossflows with motorized vehicles minimized. The minimum width for Class I (two-way) is 8 feet, desired width is 10-12 feet, and minimum shoulder width 2 feet on each side. The minimum width for Class I (one-way) is 5 feet with minimum shoulder width of 2 feet on each side.
- **Class II Bike Lane.** Provides a restricted right-of-way on a roadway's shoulder designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited; vehicle parking and crossflows by pedestrians and motorists permitted. Vehicle parking in a Class II bike lane is not desirable and should be discouraged and/or restricted where possible. Additional lane width (12 feet minimum and 13 feet desirable) shall be required if on-street parking is permitted with a typical width of eight feet. A reduction in width to allow for restriping of an existing roadway or for added turning lanes may be permitted. In such cases, a five-foot width, or gutter width plus three feet, whichever is greater, is the minimum width.
- **Class III Bikeway.** Provides for shared use of roadway facilities. These bikeways share the street with motor vehicles or share the sidewalk with pedestrians. In both conditions, bicycle use is a secondary function of the pavement.
- **Traffic Analysis Zone (TAZ).** Traffic Analysis Zone (TAZ) refers to the geographic unit used for traffic analysis within transportation planning models, such as the Orange County Transportation Analysis Model (OCTAM) VMT Screening Tool model. A TAZ is a special area delineated by state and/or local transportation officials for tabulating traffic-related data especially journey-to-work and place-of-work statistics. A TAZ usually consists of one or more census blocks, block groups, or census tracts.
- **Transit Priority Area (TPA).** As defined by Senate Bill (SB) 743, a Transit Priority Area (TPA) is an area located within a one-half mile of an existing or planned "major transit stop" or an existing stop along a "high quality transit corridor." Per Public Resources Code, Section 21064.3, "'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Per Public Resources Code, Section 21155, a high-quality transit corridor means a "corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."
- **Vehicle Miles Traveled (VMT).** VMT is defined as the total miles traveled by vehicles (within a transportation network).
- **Low VMT Area.** The City of Tustin defines low VMT areas as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.

5.9.2 REGULATORY SETTING

5.9.2.1 State Regulations

Senate Bill 743 (Steinberg, 2013)

On September 27, 2013, Senate Bill 743 (SB 743) was signed into State law. The California legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375),

the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas (GHG) emissions, as required by the California Global Warming Solutions Act of 2006 (AB 32).

SB 743 requires the California Governor's Office of Planning and Research to amend the State CEQA Guidelines to provide an alternative to level of service (LOS) as the metric for evaluating transportation impacts under CEQA. Particularly within areas served by transit, SB 743 requires the alternative criteria to promote the reduction of greenhouse gas emissions, development of multimodal transportation networks, and diversity of land uses. The alternative metric for transportation impacts detailed in the State CEQA Guidelines is VMT. Jurisdictions had until July 1, 2020, to adopt and begin implementing VMT thresholds for traffic analysis.

AB 1358: California Complete Streets Act

The California Complete Streets Act was implemented on January 1, 2011, which required circulation elements to address the transportation system from a multimodal perspective. The bill states that streets, roads, and highways must "meet the needs of all users…in a manner suitable to the rural, suburban, or urban context of the general plan." This bill requires a circulation element to plan for all modes of transportation where appropriate—including walking, biking, car travel, and transit. The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and people with disabilities.

California Fire Code

The California Fire Code sets requirements pertaining to fire safety and life safety, including for emergency access and evacuation (California Code of Regulations Title 24 Part 9). The California Fire Code is incorporated by reference in Article 8 Chapter 8100 of the Tustin Municipal Code.

5.9.2.2 Local and Regional Regulations

Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the designated metropolitan planning organization for six Southern California counties (Ventura, Los Angeles, San Bernardino, Riverside, Orange, and Imperial). As the designated metropolitan planning organization, SCAG is mandated by the federal and State governments to prepare plans for regional transportation and air quality conformity. The most recent plan adopted by SCAG is the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), also known as Connect SoCal, which was adopted in April 2024. The RTP/SCS integrates transportation planning with economic development and sustainability planning and aims to comply with State GHG emissions reduction goals, such as SB 375. With respect to transportation infrastructure, SCAG anticipates, in the RTP/SCS, that the six-county region will have to accommodate 20,909,000 residents by 2050 while also meeting the GHG emissions reduction targets set by the California Air Resources Board. SCAG is empowered by State law to assess regional housing needs and provide a specific allocation of housing needs for all economic segments of the community for each of the region's counties and cities. In addition, SCAG has taken on the role of planning for regional growth management.

City of Tustin General Plan

The City's General Plan includes the following goals and policies related to transportation in the Circulation Element and Growth Management Element:

Circulation Element

Goal 1: **Provide a system of streets that meets the needs of current and future inhabitants and facilitates the safe and efficient movement of people and goods throughout the City consistent with the City's ability to finance and maintain such a system.**

Policy 1.2: Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.

Policy 1.3: Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.

Policy 1.4: Develop and implement thresholds and performance standards for acceptable levels of service.

Policy 1.10: Require that proposals for major new developments include a future traffic impact analysis which identifies measures to mitigate any identified project impacts.

Policy 1.11: Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.

Policy 1.15: Ensure construction of existing roadways to planned widths, as new developments are constructed.

Policy 1.16: Continue to require dedication of right-of-way and construction of required public improvements on streets adjacent to construction projects at the developer's expense.

Goal 5: **Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.**

Policy 5.2: Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.

Policy 5.5: Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.

Goal 6: **Increase the use of non-motorized modes of transportation.**

Policy 6.1: Promote the safety of pedestrians and bicyclists by adhering to uniform standards and practices, including designation. of bicycle lanes, off-road bicycle trails, proper signage, and adequate sidewalk, bicycle lane, and off-road bicycle trail widths.

Policy 6.2: Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.

Policy 6.8: Support retrofit installation of sidewalks in industrial districts and Planned Community Business Parks as development occurs.

Policy 6.14: Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.

Goal 7: **Provide for well-designed and convenient parking facilities.**

Policy 7.1: Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials.

Policy 7.2: Provide sufficient off-street parking for all land uses.

Growth Management Element

Goal 2: **Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.**

Policy 2.1: Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.

5.9.3 ENVIRONMENTAL SETTING

The public roadway network serving the Project site includes 17th Street, Yorba Street, Enderle Center Drive, Vandenburg Lane, and State Route (SR) 55, which are described below and listed in Table 5.9-1.

- **17th Street** is a six-lane divided roadway with sidewalks on both sides that is designated as a major arterial in the City of Tustin General Plan. 17th Street is oriented in the east-west direction, has no bike lanes, and has a posted speed limit of 40 miles per hour (mph). On-street parking is not permitted on either side of this roadway.
- **Yorba Street** is a four-lane undivided roadway between 17th Street and Vandenberg Lane and is oriented in the north-south direction with sidewalks on both sides. The roadway is designated as a secondary arterial in the City of Tustin General Plan and the posted speed limit is 40 mph. On-street parking is not permitted along this roadway and there are no bike lanes.
- **Enderle Center Drive** is a two-lane undivided roadway between 17th Street and Vandenberg Lane and is undesignated in the General Plan. Enderle Center Drive is oriented in the north-south direction, has no bike lanes, has a posted speed limit of 40 mph, and has a sidewalk on the east side.
- **Vandenberg Lane** is a two-lane undivided roadway between Yorba Street and Enderle Center Drive and is undesignated in the General Plan. The roadway is aligned in an east-west direction, has sidewalks on both sides of the street, and has a posted speed limit of 30 mph. On-street parking is permitted along this roadway.
- **SR 55** is a 12-lane divided roadway oriented in the north-south direction. The posted speed limit on SR 55 is 55 mph and it is classified as a freeway in the General Plan. On-street parking is not permitted along this roadway.

Table 5.9-1, *Existing Roadway Characteristics within Specific Plan Study Area*, shows the roadway characteristics of the roadways directly serving the Project site.

Table 5.9-1: Existing Roadway Characteristics within Specific Plan Study Area

Roadway	Designation	Number of Lanes Fronting Project Site	Sidewalks?	Bike Lane?
17th Street (E/W)	Major Arterial	6-lane divided.	Yes, both sides.	No
Yorba Street (N/S)	Secondary Arterial	4- lane undivided.	Yes, both sides.	No
Enderle Center Drive (N/S)	Undesignated	2- lane undivided.	Yes, on the northbound side. None on the southbound side	No

Roadway	Designation	Number of Lanes Fronting Project Site	Sidewalks?	Bike Lane?
Vandenberg Lane (E/W)	Undesignated	2-lane undivided	Yes, both sides.	No
SR 55(N/S)	Freeway	12- lane divided.	No, both sides	No

5.9.3.1 Existing Site Access

Vehicular access to the Project site is currently provided via unsignalized driveways along 17th Street, Yorba Street, Vandenberg Lane, and Enderle Center Drive. Signalized access is provided on Yorba Street at the intersection of Vandenberg Lane.

5.9.3.2 Existing Transit Service

Public transit bus service for the City is provided by the Orange County Transportation Authority (OCTA). The established network includes Routes 60, 61, 65, 66, 71, 75 and 463. The Project is not located within a Transit Priority Area (TPA); however, adjacent to the Project at the junction of 17th Street and Enderle Center Drive, there are two existing public transit bus stations served by Route 60 with bus service every 30 minutes. These stations are situated on both the northern side of 17th Street and Yorba Street and on the southern side of 17th Street and Enderle Center Drive. The major routes of travel for Route 60 include Larwin Square to Long Beach via Newport and Seventeenth. Route 60 operates on approximately 30-minute headways on weekdays and weekends and connects to the Newport Transportation Center.

The Metrolink Orange County Line and the Inland Empire-Orange County commuter lines travel through Tustin, with stops at the Santa Ana Metrolink Station located 1.7 miles west of the Project site and the Orange Metrolink Station located 2.5 miles northwest of the Project site. In addition, passenger rail service is provided from two Amtrak depots in neighboring cities; Irvine to the south and Santa Ana to the west, which connects travelers to neighboring communities throughout Los Angeles and San Diego counties.

5.9.3.3 Existing Bicycle and Pedestrian Facilities

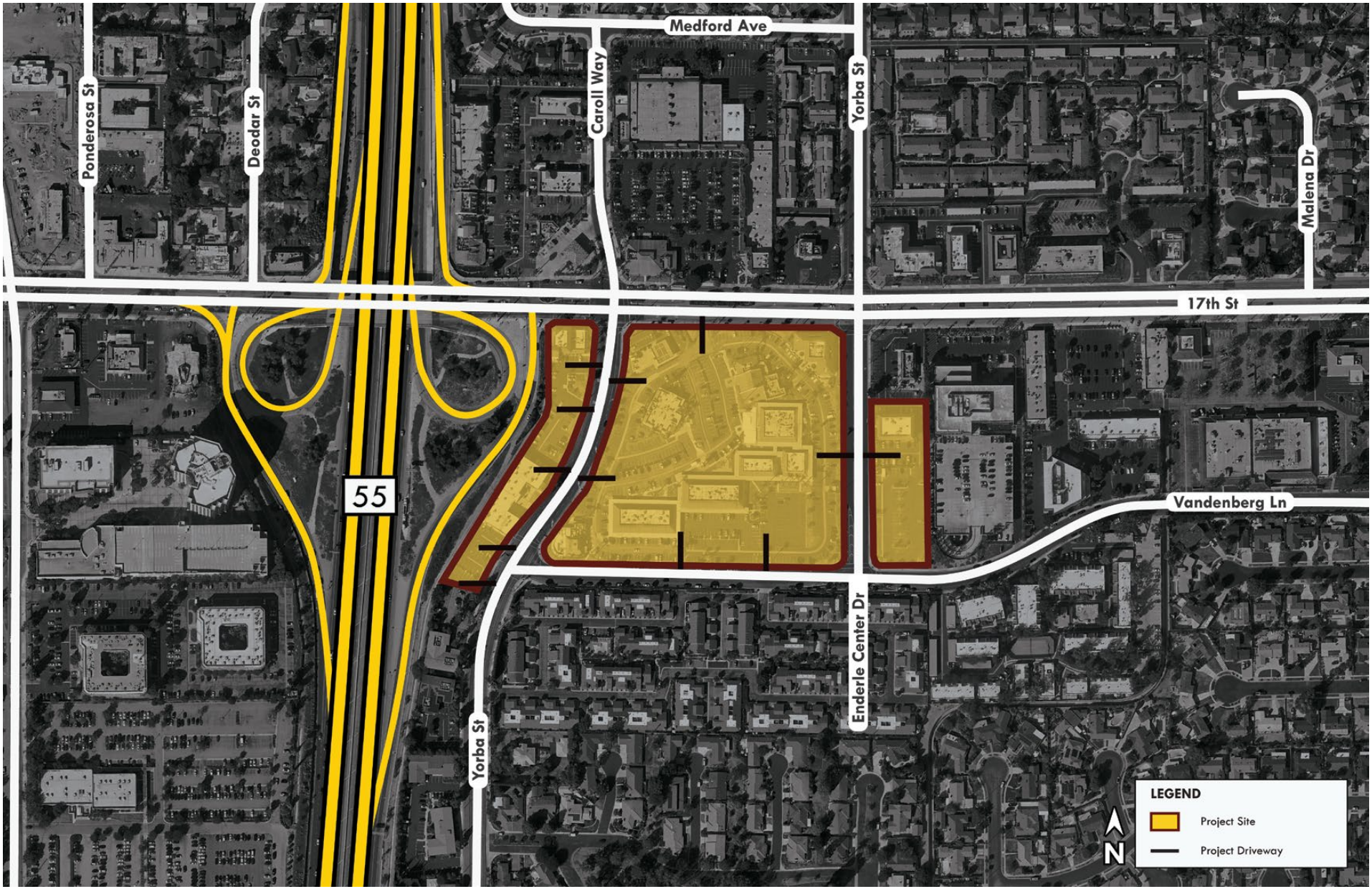
As shown on Table 5.9-1, there are no bike lanes on the public roadway network currently serving the Project site. The closest existing bike lane to the Project site is a Class II Bike Lane east of Prospect Avenue along 17th Street. According to Figure C-5, *Master Bikeway Plan,* of the City's General Plan, a Class II bike lane is planned along Prospect Avenue, approximately 1,000 feet west of the Project site. However, this bike lane has not been implemented. Sidewalks currently exist on both sides of 17th Street, Vandenburg Lane, and Yorba Street and on the northbound side of Enderle Center Drive.

5.9.3.4 Existing VMT

The Project site is currently vacant and undeveloped. As detailed in Table 5.9-2 below, the Project site currently generates 7,058 daily trips, with 444 trips in the AM peak hour and 648 trips in the PM peak hour.

Low vehicle miles traveled (VMT) generating areas are defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city. The Project site is located in one low VMT area (per capita). The City of Tustin average city-wide VMT under the 2016 Base Model Year is 15.0 home-based VMT per capita and 25.1 home-based work VMT per employee. The Project site currently has a VMT of 12.0 per capita and a VMT of 23.7 per employee.

Project Site Circulation



Enderle Center Rezone Project
City of Tustin

Figure 5.9-1

This page intentionally left blank.

5.9.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

TRA-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

TRA-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

TRA-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

TRA-4 Result in inadequate emergency access.

Vehicle Miles Traveled Significance Criteria

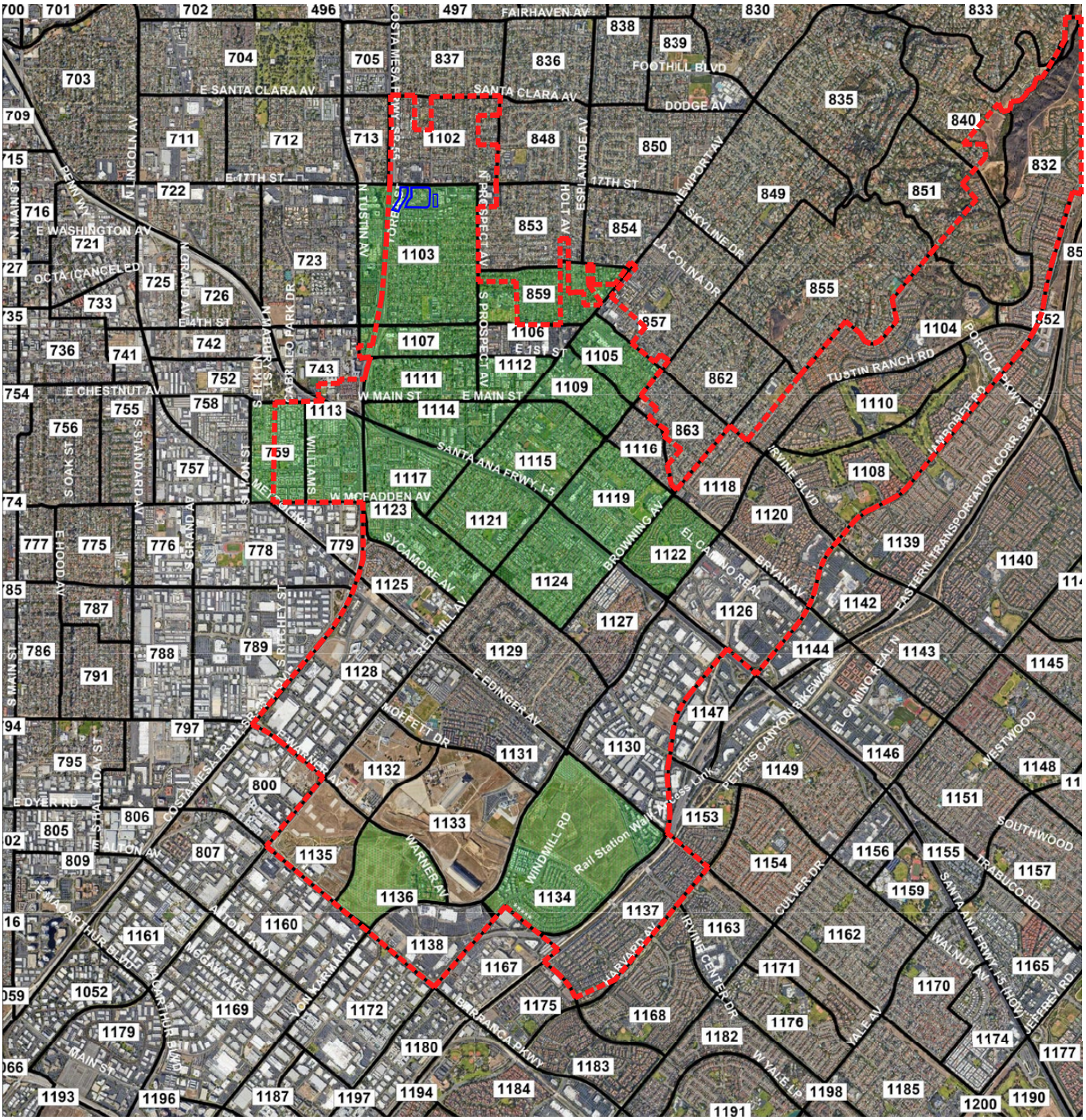
State CEQA Guidelines Section 15064.3(b)(1) provides that for land use projects:

> VMT traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

The Project is located in the City of Tustin (City). The City's Guidelines provide the following screening thresholds to assess whether further VMT analysis is required. If a project meets one of the following criteria, then the VMT impact of the project would be considered less-than-significant and no further analysis of VMT would be required:

- Projects which consist of 100% affordable housing.
- Projects located within one half mile of qualifying transit. Qualifying transit is defined as follows:
    - Major transit stop is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Pub. Resources Code, § 21064.3)
    - High-quality transit corridor is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. (Pub. Resources Code, § 21155).
- Projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses. The types of projects considered local serving include K-12 schools, local parks, day care centers, gas stations, libraries, fire stations, and other local serving civic uses.
- Projects located in a low VMT generating area propose a project similar to the conditions already constructed in the area. Low VMT generating area is defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.
- Projects which generate less than 500 daily vehicle trips.

This page intentionally left blank.



N

Legend:

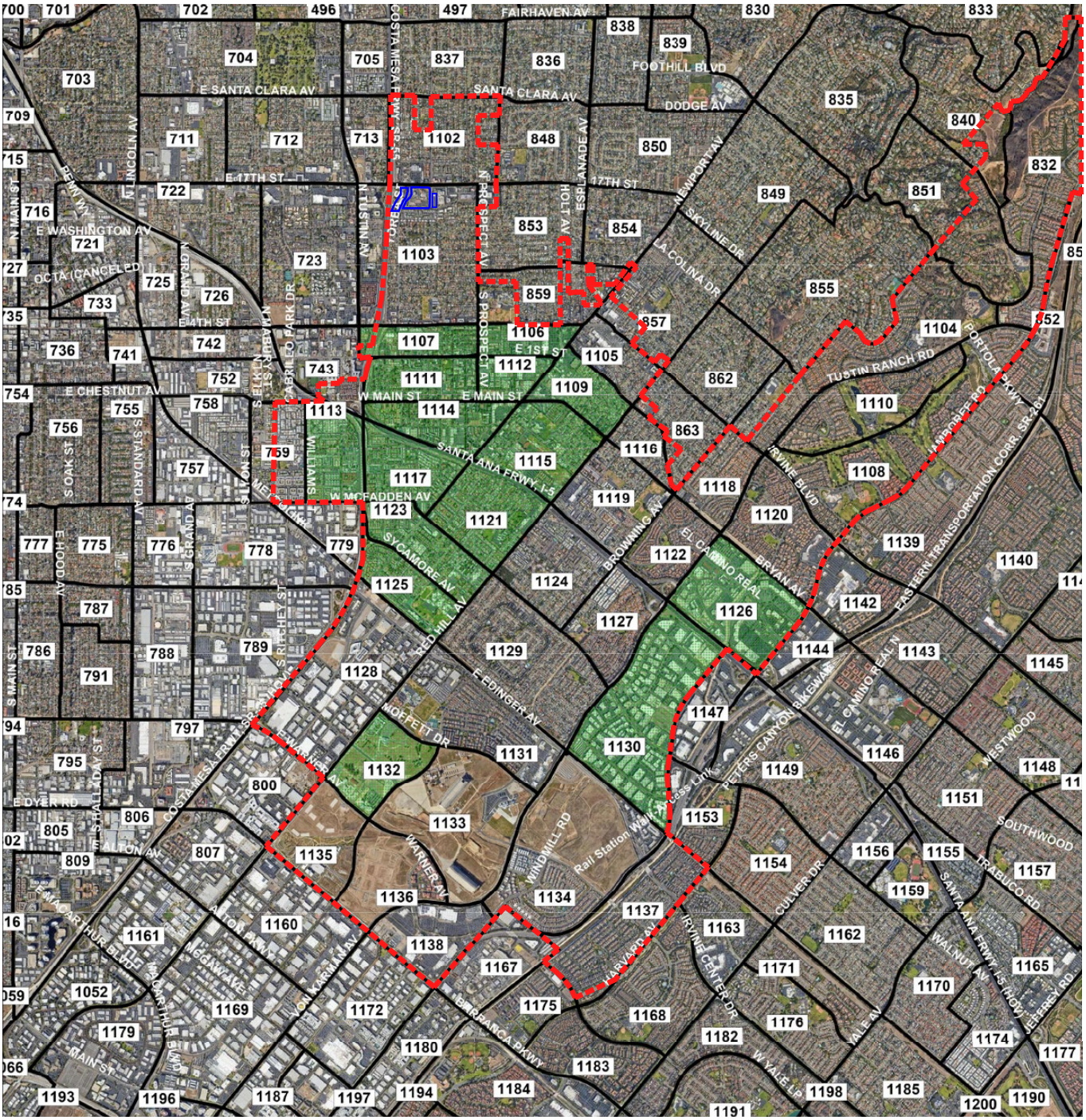
= VMT/employee less than or equal to City of Tustin 2016 citywide average VMT/employee

= City of Tustin Boundary

= Project Site

This page intentionally left blank.

VMT Per Employee



Legend:

= VMT/employee less than or equal to City of Tustin 2016 citywide average VMT/employee

= City of Tustin Boundary

= Project Site

N

This page intentionally left blank.

5.9.5 METHODOLOGY

To determine whether the proposed Project would result in a significant impact related to conflict with a program, plan, ordinance, or policy related to the effectiveness of the circulation system, the extent to which the proposed Project would provide facilities to enhance the use of public transit, pedestrian, and bicycle mobility, the proposed Project was compared to adopted plans for public transit, pedestrian mobility, and bicycle facilities. A significant impact would result if the proposed Project resulted in a conflict that could result in an impact on the environment.

As outlined in CEQA Guidelines Section 15064.3, except as provided for roadway capacity transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, this analysis has been prepared in accordance with CEQA requirements to evaluate potential transportation impacts based on VMT. The *City of Tustin Vehicle Miles Traveled Analysis Guidelines* provides criteria for projects that would be considered to have a less than significant impact on VMT and therefore could be screened out from further analysis; and those that would have the potential to result in a VMT impact and therefore require a VMT analysis based on VMT reduction thresholds. Consistent with the City Guidelines, the VMT screening thresholds were used to identify if the proposed Project could have an impact on VMT, which is detailed below. Trips generated by the proposed Project have been estimated based on trip generation rates provided by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, 2021.

Vehicle Miles Traveled Analysis Methodology

Consistent with the City's Guidelines, the VMT screening thresholds were used to identify if the Project could have an impact on VMT. When a project fails to meet any of the aforementioned screening criteria, a more comprehensive VMT analysis may be warranted. The City's guidelines require use of the Orange County Transportation Analysis Model (OCTAM) for preparation of VMT analysis. The Model includes validated scenarios for the years 2016 and 2045. These scenarios have been validated using existing traffic counts. Data for years between 2016 and 2045 can be extrapolated using linear interpolation between the 2016 and 2045 Model output.

The City of Tustin VMT Guidelines utilizes recommendations provided by California Office of Planning and Research (OPR) and modeling data provided by OCTA to establish the following VMT thresholds of significance projects. The City's significance threshold for residential projects is based on the project's home-based VMT per capita and the City's significance threshold for non-residential projects is based on the project's employment VMT per employee. The significance criteria from the City's guidelines are as follows:

Residential Projects: A significant transportation impact occurs if:

1. The project's base year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.
2. The project's future year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

Non-residential Projects: A significant transportation impact occurs if:

1. The project's base year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee for the City of Tustin.
2. The project's future year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee for the City of Tustin.

The Project is located within one Model TAZ 1103. The total population and employed population of the Project was calculated using the current household average in adjacent TAZs because there are currently no existing households in TAZ 1103. The Project total households and population was entered into TAZ 1103. Employment growth in TAZ 1103 was already accounted for by the model. The metric utilized as the residential VMT threshold of significance for City of Tustin is the average city-wide VMT under 2016 Base Model Year, which has been calculated to be 15.0 home-based VMT per capita. The metric utilized as the employment VMT per employee VMT threshold of significance for City of Tustin is the average city-wide VMT under 2016 Base Model Year, which has been calculated to be 25.1 home-based work VMT per employee.

5.9.6 ENVIRONMENTAL IMPACTS

IMPACT TRA-1: THE PROJECT WOULD NOT CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING THE CIRCULATION SYSTEM, INCLUDING TRANSIT, ROADWAY, BICYCLE, AND PEDESTRIAN FACILITIES.

Less than Significant. The following analysis has been prepared pursuant to SB 743, which requires that VMT thresholds be utilized for traffic analysis, and State CEQA Guidelines Section 15064.3 that states that a project's effect on automobile delay shall not constitute a significant environmental impact.

Project Trip Generation: Vehicle trip estimates for future development under the proposed Project were generated by using trip rates from the Institute of Transportation Engineers, *Trip Generation 11th Edition*, 2021. Existing conditions (Baseline) were assessed using trip rates for Land Use Code 932 (High-Turnover Sit-Down Restaurant), 821 (Retail), and 710 (Office). Based on the density of the proposed housing, trip rates for Land Use Code 221 (Multifamily Housing (Mid-Rise)) were used. Table 5.9-2 identifies the existing trips generated by the existing development on the site and compares it to the potential future development under the proposed Housing Overlay to determine the net increase in vehicle trips for the residential and commercial portions of the Project. As detailed, potential future development is forecasted to generate 11,470 daily trips, with 757 trips in the AM peak hour and 1,041 trips in the PM peak hour. Future development with the existing commercial development is forecasted to generate 18,528 daily trips, including 1,201 AM peak hour and 1,689 PM peak hour trips.

Roadway: Regional access to the Project site is provided by SR-55. Local access to the site is provided via 17th Street, Yorba Street, Vandenberg Lane, and Enderle Center Drive. Each roadway is described above and in Table 5.9-1. The proposed Project would continue to provide vehicular access to the site from the adjacent roadways and there would be no changes to the roadway access points. However, potential future development facilitated by the Project may include driveway and roadway improvements. Specific roadway improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed. Future projects under the proposed Project would be required to comply with the circulation system standards and to adhere to uniform standards and practices. Compliance with standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians would be ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. The proposed Project would not conflict with existing facilities and would provide additional facilities as needed. Thus, impacts related to pedestrian facilities would not occur.

Transit Services: As described previously, the Project vicinity is served by OCTA. There are two bus stops within one mile of the Project site. The nearest OCTA bus stop is located near the Yorba Street/Enderle Center Drive and 17th Street intersection, nearly adjacent to the Project site. Additionally, the Metrolink Inland Empire-Orange County Line has a stop 1.7 miles east of the Project of the Project site, at the Santa

Ana Metrolink Station. This existing transit service would continue to serve its ridership in the area. Furthermore, specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed. However, potential future projects would be required, if deemed necessary, to fund transit facilities as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Therefore, the proposed Project would not alter or conflict with existing roadway facilities addressed in the circulation element, and impacts related to roadway facilities would not occur.

Bicycle Facilities: As detailed previously, there are no bike lanes on any public roadway network currently serving the Project site. In addition, the City's General Plan Circulation Element, Figure C-5 *Master Bikeway Plan*, does not identify any roadway network currently serving the Project site as a planned bike lane or bikeway. The nearest planned bicycle lane is located 1,000 feet west of the Project site at Prospect Avenue. Implementation of the Project would not alter or conflict with existing or planned bike lanes or bicycle transportation. Thus, impacts related to bicycle facilities would not occur.

Pedestrian Facilities: Sidewalks currently exist on both sides of 17th Street, Vandenburg Lane, and Yorba Street and on the northbound side of Enderle Center Drive within the vicinity of the Project site. The Project does not propose a specific development or any demolition, including sidewalks; however, potential future development facilitated by the Project may include sidewalk improvements. Specific sidewalk improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed. Future projects under the proposed Housing Overlay would be required to comply with and adhering to uniform standards and practices, including designation of bicycle lanes and adequate sidewalk as ensured and verified by the city during the plan check and permitting process, prior to obtaining building permits. Additionally future development is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban Development's Fair Housing Accessibility Guidelines (PPP T-1). Therefore, the proposed Project would not conflict with pedestrian facilities, but instead would provide additional facilities. Thus, impacts related to pedestrian facilities would not occur.

Policies: Section 5.4, *Land Use*, includes a list of applicable goals and policies related to the Project. Tables 5.4-1 and 5.4-2 include analysis of the Project's consistency with the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy and City of Tustin General Plan, respectively. As discussed in Section 5.4, the Project would be consistent with all applicable goals and policies. Thus, impacts related to conflict with a program, plan, ordinance, or policy addressing the circulation system of the Project site and surrounding area would not occur.

Table 5.9-2: Proposed Project Trip Generation

Scenario	Land Use	ITE Code	Unit	ITE Daily Trip Rate/Unit	Project Size	Project ADTs	ITE AM Trip Rate/Unit	Project AM Trips	ITE PM Trip Rate/Unit	Project PM Trips
Existing Conditions (Baseline)	High-Turnover (Sit-Down) Restaurant	932	KSF	107.20	28.75	3,082	9.57	275	9.05	260
	Retail	821	KSF	94.49	39.96	3,776	3.53	141	9.03	361
	Office	710	KSF	10.84	18.426	200	1.52	28	1.44	27
Existing Conditions (Baseline) TOTAL TRIPS						**7,058**		**444**		**648**
Proposed Housing Units + Remaining Buildout Capacity (Project)	Proposed Multi-Family Housing	221	DU	4.54	413	1,875	0.37	153	0.39	161
	[1]Future High-Turnover (Sit-Down) Restaurant	932	KSF	107.20	39.09	4,190	9.57	374	9.05	354
	[1]Future Retail	821	KSF	94.49	54.33	5,133	3.53	192	9.03	491
	[1]Future Office	710	KSF	10.84	25.051	272	1.52	38	1.44	36
Proposed Project TOTAL TRIPS						**11,470**		**757**		**1,041**
Existing Conditions + Proposed Housing Units + Remaining Buildout Capacity (Total)	Proposed Multi-Family Housing	221	DU	4.54	413	1,875	0.37	153	0.39	161
	High-Turnover (Sit-Down) Restaurant	932	KSF	107.20	67.84	7,272	9.57	649	9.05	614
	Retail	821	KSF	94.49	94.29	8,909	3.53	333	9.03	851
	Office	710	KSF	10.84	43.48	471	1.52	66	1.44	63
Existing Conditions + Proposed Housing Units + Remaining Buildout Capacity (Total) TOTAL TRIPS						**18,528**		**1,201**		**1,689**

Notes: ADT = Average Daily Trips
DU = Dwelling Unit
ITE = Institute of Transportation Engineers Trip Generation Manual 11th Edition, 2021
KSF = Thousand Square Feet
Source: VMT Analysis (Appendix D)

IMPACT TRA-2: THE PROJECT WOULD NOT CONFLICT OR BE INCONSISTENT WITH CEQA GUIDELINES § 15064.3, SUBDIVISION (B).

Less than Significant.

As described previously, State CEQA Guidelines Section 15064.3(b) focuses on determining the significance of VMT-related transportation impacts. The City of Tustin Guidelines contain screening thresholds to assess whether a project has the potential to result in an impact and further VMT analysis is required. If none of the screening criteria are met, then the project may require mitigation measures and/or VMT modeling to determine if the VMT thresholds are exceeded.

The applicability of each criterion to the Project is discussed below.

Screening Criteria 1 – Affordable Housing Screening

As per the City's guidelines, projects that consist of 100% affordable housing will have a less-than-significant impact on VMT. The Project does not consist of 100% affordable housing and therefore would not satisfy the requirements of Screening criteria 1 - Affordable Housing Screening.

Screening Criteria 2 – High Quality Transit Screening

As per the City's guidelines, projects located within one half mile of qualifying transit may be presumed to have a less than significant impact. The Project is located approximately 4 miles away from qualifying transit; therefore, the Project would not satisfy the requirements of Screening Criteria 2 – High Quality Transit screening.

Screening Criteria 3 - Project Type Screening

As per the City's guidelines, projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses would have a less than significant impact on VMT. The types of projects considered local serving include K-12 schools, local parks, day care centers, gas stations, libraries, fire stations, and other local serving civic uses.

Screening Criteria 3 would not apply to the residential portion of the Project. In addition, the Project proposes retail use with an area of 118,474 SF, which is more than 50,000 square feet. Therefore, it would not satisfy the requirements of Screening Criteria 3 - Project Type Screening.

Screening Criteria 4 - Low VMT Area Screening

The City's guidelines include a screening threshold for projects located in a low VMT generating area. Low VMT generating area is defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.

The Project is located in a Low VMT Generating Area for VMT per capita based on the City's Guideline. Therefore, the residential portion of the Project would satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening. The residential portion of the Project would meet Screening Criteria 4 – Low-VMT Area Screening, and therefore the residential portion of the Project's impact on VMT would be considered less-than-significant.

The Project is not located in a Low VMT Generating Area for VMT per employee based on the City's Guideline. Therefore, the commercial portion of the Project would not satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening. Because the commercial portion of the Project would not meet any of the City's screening criteria, the commercial portion of the Project's impact on VMT would not be considered less-than-significant.

Screening Criteria 5 - Generating less than 500 daily vehicle trips

As per the City's guidelines, projects which generate less than 500 daily vehicle trips would have a less than significant impact on VMT.

As shown in Table 5.9-3, the future development of the Enderle Center site is forecasted to generate 11,470 daily trips, which is more than 500 daily vehicle trips. Therefore, the Project would not meet Screening Criteria 5.

Screening Conclusions

Although the Project would meet Screening Citeria 4 for residential Low VMT Area Screening, a complete VMT analysis (EPD Solutions, 2024) was conducted at the request of the City. The VMT analysis presented in this analysis evaluates the VMT impacts of both the residential and commercial portions within the proposed Enderle Center Housing Overlay Zone.

As described previously, State CEQA Guidelines Section 15064.3(b) focuses on determining the significance of VMT-related transportation impacts. As stated above, according to the City's Guidance, a project's VMT impacts are considered significant if the project's base year home-based VMT per capita or base year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per capita or employee for the City of Tustin. Additionally, if the project's future year home-based VMT per capita or future year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee or capita for the City of Tustin.

As shown in Table 5.9-3, the Project's home based VMT per capita would be lower than the OCTAM base model year citywide average home based VMT per capita for the City of Tustin under both base and future year conditions. The Project's home-based VMT per capita would be 19.7 percent below the City's threshold under base conditions and 18.7 percent below the City's threshold under future conditions; therefore, the residential portion of the Project would result in a less-than-significant VMT impact.

Table 5.9-3: VMT Analysis of Residential of Project Impact per City Guidelines

	Base Year 2016	**Future Year 2045**
Project TAZ 1103 Zone Total Home-based VMT	47,899	48,954
TAZ 1103 Total Residents	3,991	4,029
Project 1103 Home-based VMT per capita	**12.0**	**12.2**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline Home-based VMT per capita	**15.0**	**15.0**
Percent Above/Below Threshold	-19.7 percent	-18.7 percent
Impact?	**No**	**No**

Source: VMT Analysis (Appendix D)

As shown in Table 5.9-4, the Project's employment VMT per employee would be lower than the OCTAM base model year citywide average employment VMT per employee for the City of Tustin under both base and future year conditions. The Project's employment VMT per employee would be 5.5 percent below the City's threshold under base conditions and 3.7 percent below the City's threshold under future conditions; therefore, the commercial portion of the Project would result in a less-than-significant VMT impact.

Table 5.9-4: VMT Analysis of Commercial Part of Project Impact per City Guidelines

	Base Year 2016	Future Year 2045
Project TAZ 1103 Zone Total Home-based Work VMT	261,211	273,166
TAZ 1103 Total Employees	11,012	11,303
Project 1103 Home-based Work VMT per employee	**23.7**	**24.2**
City of Tustin Baseline Home-based Work VMT	1,475,341	1,475,341
City of Tustin Baseline Total Employees	58,774	58,774
City of Tustin Baseline Home-based Work VMT per employee	**25.1**	**25.1**
Percent Above/Below Threshold	-5.5 percent	-3.7 percent
Impact?	**No**	**No**

Source: VMT Analysis (Appendix D)

Overall, pursuant to the City's VMT analysis guidelines and guidance from OPR and CEQA Guidelines Section 15064.3(b), the entire Project can be assumed to have a less-than-significant VMT impact.

IMPACT TRA-3: THE PROJECT WOULD NOT SUBSTANTIALLY INCREASE HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT).

Less than Significant.

The Project would include a General Plan Amendment, Zoning Code Amendment, and rezone of the Project site with a Housing Overlay district to allow for future development of up to 413 housing units on approximately seven acres of developable land within the existing 11.8-acre site. Although the Project does not propose a specific development, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element. Therefore, future residential development may result in temporary construction activities for roadway and driveway improvements.

All roadway improvements would be constructed in accordance with applicable local, State, and federal roadway standards and practices. As part of the grading plan and building plan review processes for future development, City permits would require appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures and measures to properly route heavy-duty construction vehicles entering and leaving the site (as applicable) consistent with the City of Tustin Standard Plans and Design Standards (City of Tustin Department of Public Works, 2022) (PPP T-2). As a result, impacts related to vehicular circulation design features and incompatible uses during construction of the proposed Project would be less than significant.

Additionally, any proposed roadway improvements, restriping, and related street, and bikeway improvements of local streets and internal driveways would be conducted in conformance with City design standards for roadway improvements. Compliance with existing regulations would be ensured through the City's traffic engineering review and construction permitting process for all future developments (PPP T-2). As part of the Project, the City will develop objective design standards (ODS) that include parking, siting, and additional standards consistent with the City of Tustin Standard Plans and Design Standards (City of Tustin Department of Public Works, 2022) for any future development proposed under the Project. Further, roadways, sidewalks, and bicycle improvements associated with the future development of commercial and residential mixed uses allowed under the proposed Project would be similar to surrounding uses and would not result in incompatible vehicular uses that could increase hazards. All future development would be subject to the design requirements of the GP or ODS (whichever is more stringent, as applicable) (City of Tustin, 1997). As a result, impacts related to hazardous vehicular circulation design features and incompatible uses

during construction and operation of future development provided by the proposed Project would be less than significant.

IMPACT TRA-4: THE PROJECT WOULD NOT RESULT IN INADEQUATE EMERGENCY ACCESS.

Less than Significant.

Construction

As described above, the Project does not propose a specific development. However, the Project would provide for future proposed development through implementation of the housing overlay district. Future development allowed under the new housing overlay district is speculative, but may require construction activities, including equipment and supply staging and storage. However, all future development would be required to ensure emergency access in accordance with Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9), which would be ensured through the City's permitting process. Additionally, all potential road closures would be subject to review and approval by the City, including issuance of an encroachment permit. Once offsite roadway, utility, pedestrian, and other potential improvements are completed as part of future development, all road conditions will be restored to normal. Thus, implementation of the Project, including potential future development through the City's permitting process, would ensure existing regulations are adhered to. Therefore, impacts related to inadequate emergency access during construction activities would be less than significant.

Operation

Operation of potential future development would also not result in inadequate emergency access or access to nearby uses. Future applicants would be required to design and construct internal access and provide fire suppression facilities (e.g., hydrants and sprinklers) in conformance with City's *Standard Plans and Design Standards* (PPP T-2). Additionally, the City's Fire Department (OCFA) would review the development plans prior to approval to ensure adequate emergency access pursuant to the requirements in the International Fire Code and Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9). As a result, the proposed Project including potential future development would not result in inadequate emergency access or access to nearby uses, and no impacts would occur.

5.9.7 CUMULATIVE IMPACTS

Vehicle Miles Traveled

The cumulative traffic study area for the proposed Project includes the City of Tustin and surrounding jurisdictions. The information utilized in this cumulative analysis is based on the potential to combine with impacts from projects in the vicinity of the proposed Project, as discussed in Section 5.0, *Environmental Impact Analysis*, and listed in Table 5-1, *Cumulative Projects List*, and projections contained within OCTAM.

The Office of Planning and Research's *Technical Advisory on Evaluating Transportation Impacts in CEQA* states that "a project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact." As discussed under Impact TRA-2, the Project would have a less-than-significant VMT impact. Therefore, the proposed Project would not result in a cumulatively considerable impact related to VMT and cumulative traffic impacts would also be less than significant.

Design and Roadway Hazards

The evaluation of Impact TR-3 and Impact TR-4 concluded that the proposed Project would not result in impacts related to incompatible uses, hazards due to roadway design, or emergency access. Cumulative

development in the City and surrounding jurisdictions would be subject to similar site-specific reviews, including reviews of roadway design, geometrical design features, and future infrastructure improvements, which would ensure projects are consistent with roadway design standards and would not result in unsafe traffic conditions. Therefore, the Project's impact to increase in hazardous conditions would be less than significant, and the Project would not contribute to a cumulatively considerable impact associated with hazardous design features.

Alternative Transportation

The evaluation of Impact TRA-1 concluded that the proposed Project would not result in significant impacts related to alternative transportation or policies addressing the circulation system. Cumulative development in the City and surrounding jurisdictions would be subject to site-specific reviews, including reviews of sidewalk, bike lane, and bus stop designs that would not allow potential cumulatively considerable impacts related to alternative transportation. Therefore, the Project would not cumulatively combine with other projects to result in impacts related to alternative transportation. Thus, cumulative impacts would be less than significant.

5.9.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9)
- SCAG 2024 - 2050 Regional Transportation Plan/Sustainable Communities Strategy
- City of Tustin General Plan Circulation Element
- City of Tustin Municipal Code

Plans, Programs, or Policies

PPP T-1: Sidewalk Standards. Sidewalks shall be provided on a private street for attached and detached residential products in accordance with Standard B102 of the City's Construction Standards, Storm Drain and On-Site Private Improvements, and is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban Development's Fair Housing Accessibility Guidelines.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.9.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts TRA-1 through TRA-4 would be less than significant.

5.9.10 MITIGATION MEASURES

No mitigation measures are required for the proposed Project.

5.9.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts TRA-1 through TRA-4 would be less than significant.

5.9.12 REFERENCES

City of Tustin. (2018, November). *City of Tustin General Plan*. Retrieved from https://www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF

City of Tustin Department of Public Works. (2022). *Standard Plans and Design Standards*. Retrieved from https://www.tustinca.org/DocumentCenter/View/339/Public-Works-Standards-2022-Edition-PDF

City of Tustin (2024, March). *Vehicle Miles Traveled Analysis Guidelines*.

EPD Solutions. (2024). Enderle Center Rezone Project *Vehicle Miles Traveled (VMT) Analysis*. (Appendix D)

State of California Office of Planning and Research. (2018, April). *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Retrieved from https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf

5.10 Tribal Cultural Resources

5.10.1 INTRODUCTION

This section addresses potential impacts to tribal cultural resources (TCRs) from implementation of the proposed Project. Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Archaeological Resources Records Search Results for the Enderle Center Project, Tustin, California (APNs 401-252-05, -06, -08 through -10, 401-253-03, and -04)*, prepared by BFSA Environmental Services, February 16, 2024 (Appendix E).

Additionally, part of this analysis is based upon Project-specific coordination and consultation with California Native American tribes that are traditionally and culturally affiliated with the Project region. In accordance with Public Resources Code Section 15120(d), certain information and communications that disclose the location of archaeological sites and sacred lands are allowed to be exempt from public disclosure.

5.10.2 REGULATORY SETTING

5.10.2.1 Federal Regulations

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) of 1979 regulates the protection of archaeological resources and sites on federal and Native American lands. The ARPA regulates authorized archaeological investigations on federal lands; increased penalties for looting and vandalism of archaeological resources; and required that the locations and natures of archaeological resources be kept confidential in most cases. In 1988, amendments to the ARPA included a requirement for public awareness programs regarding archaeological resources.

Native American Graves Protection and Repatriation Act (NAGPRA)

NAGPRA is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

5.10.2.2 State Regulations

California Public Resources Code

Archaeological resources are protected pursuant to a wide variety of State policies and regulations enumerated under the California Public Resources Code (PRC). In addition, cultural resources are recognized as nonrenewable resources and therefore receive protection under the PRC and the California Environmental Quality Act (CEQA).

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the Native American Heritage Commission (NAHC). These sections also require notification to descendants of discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

California Senate Bill 18

Senate Bill 18 (SB 18) (California Government Code Section 65352.3) sets forth requirements for local governments to consult with California Native American tribes identified by the California NAHC to aid in the protection of TCRs. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning to protect, or mitigate impacts on, TCRs. The *Tribal Consultation Guidelines: Supplement to General Plan Guidelines* (OPR, 2005), identifies the following contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).

Because the proposed Project includes approval of a General Plan Amendment, it is subject to the statutory requirements of SB 18 Tribal Consultation Guidelines.

California Assembly Bill 52

Assembly Bill 52 (AB 52) established a requirement under CEQA to consider "tribal cultural values, as well as scientific and archaeological values when determining impacts and mitigation." PRC Section 21074(a) defines *tribal cultural resources* (TCRs) as "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" that are either "[i]ncluded or determined to be eligible for inclusion in the California Register of Historical Resources" or "in a local register of historical resources." Additionally, defined cultural landscapes, historical resources, and archaeological resources may be considered TCRs. PRC Section 21074(b), (c). The lead agency may also in its discretion treat a resource as a TCR if it is supported with substantial evidence.

Projects for which a Notice of Preparation for a Draft EIR was filed on or after July 1, 2015, are required to have lead agencies offer California Native American tribes traditionally and culturally affiliated with the project area consultation on CEQA documents prior to submitting an EIR in order to protect TCRs. PRC Section 21080.3.1(b) defines "consultation" as "the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement." Consultation must "be conducted in a way that is mutually respectful of each party's sovereignty [and] recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance." The consultation process is outlined as follows:

1. California Native American tribes traditionally and culturally affiliated with the project area submit written requests to participate in consultations.
2. Lead agencies are required to provide formal notice to the California Native American tribes that requested to participate within 14 days of the lead agency's determination that an application package is complete or decision to undertake a project.

3. California Native American tribes have 30 days from receipt of notification to request consultation on a project.
4. Lead agencies initiate consultations within 30 days of receiving a California Native American tribe's request for consultation on a project.
5. Consultations are complete when the lead agencies and California Native tribes participating have agreed on measures to mitigate or avoid a significant impact on a TCR, or after a reasonable effort in good faith has been made and a party concludes that a mutual agreement cannot be reached (PRC Sections 21082.3(a), (b)(1)-(2); 21080.3.1(b)(1)).

AB 52 requires that the CEQA document disclose significant impacts on TCRs and discuss feasible alternatives or mitigation to avoid or lessen an impact.

California Health and Safety Code Section 7050.5

Health & Safety Code Section 7050.5 requires that if human remains are discovered within the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he/she shall contact, by telephone within 24 hours, the NAHC.

California Public Resources Code Sections 5097.9 to 5097.991

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the NAHC. These sections also require notification to descendants of discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

5.10.2.3 Local and Regional Regulations

General Plan

Conservation/Open Space/Recreation Element

Goal 12: **Maintain and enhance the City's unique culturally and historically significant building sites or features.**

Policy 12.1: Identify, designate, and protect facilities of historical significance, where feasible.

Policy 12.2: Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.

Policy 12.3: Development adjacent to a place, structure or object found to be of historic significance should be designed so that the uses permitted and the architectural design will protect the visual setting of the historical site.

Goal 13: **Preserve Tustin's archaeological and paleontologic resources.**

Policy 13.1: Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.

Policy 13.2: Require mitigation measures where development will affect archaeological or paleontological resources.

5.10.3 ENVIRONMENTAL SETTING

Tribal Cultural Resources

A records search from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton was completed and encompassed the Project site and a 500-foot buffer surrounding the Project (BFSA Environmental Services, 2024). Based on the records search results, no resources are recorded within the Project site or within the 500-foot search buffer. Additionally, no previous studies are recorded on the property, although there are two studies recorded within the search area. However, neither of the two studies are directly related to the Project site.

Sacred Lands File Search

TCRs can include archaeological sites, built environment resources, locations of events or ceremonies, resource procurement areas, and natural landscape features with special significance to one or more indigenous groups. The City requested a Sacred Lands File (SLF) Search from the NAHC and received the results on October 19, 2023. The SLF returned negative results, indicating that no known tribal resources are located in the Project area.

5.10.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.10.5 METHODOLOGY

The City requested a SLF Search from the NAHC and received the results on October 3, 2023. The SLF returned negative results, indicating that no known tribal resources are located in the Project area.

In compliance with SB 18 and AB 52, on August 28, 2023, and October 26, 2023, the City sent letters to the following Native American tribes that may have knowledge regarding TCRs in the Project vicinity:

- Campo Band of Diegueno Mission Indians
- Ewiiaapaayp Band of Kumeyaay Indians
- Gabrieleno Band of Mission Indians Kizh Nation
- Gabrieleno Tongva San Gabriel Mission Indians
- Gabrielino Tongva Nation
- Gabrielino Tongva Indians of California Tribal Council
- Gabrielino Tongva Tribe

- Juaneno Mission Indians Acjachemen Belardes
- Juaneno Band of Mission Indians Acjachemen Nation 84A
- La Posta Band of Diegueno Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Diegueno Mission Indians
- Pala Band of Mission Indians
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseno Indians

The Gabrieleño Band of Mission Indians – Kizh Nation responded on November 14, 2023. Consultation with the Gabrieleño Band of Mission Indians – Kizh Nation occurred via email and the Tribe provided requested mitigation measures. None of the other tribes have responded to the letters at the time of this Draft EIR.

5.10.6 ENVIRONMENTAL IMPACTS

IMPACT TCR-1: THE PROJECT WOULD NOT CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A TRIBAL CULTURAL RESOURCE, DEFINED IN PUBLIC RESOURCES CODE § 21074 AS EITHER A SITE, FEATURE, PLACE, CULTURAL LANDSCAPE THAT IS GEOGRAPHICALLY DEFINED IN TERMS OF THE SIZE AND SCOPE OF THE LANDSCAPE, SACRED PLACE, OR OBJECT WITH CULTURAL VALUE TO A CALIFORNIA NATIVE AMERICAN TRIBE, AND THAT IS:

(I) LISTED OR ELIGIBLE FOR LISTING IN THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES, OR IN A LOCAL REGISTER OF HISTORICAL RESOURCES AS DEFINED IN PUBLIC RESOURCES CODE SECTION 5020.1(K), OR

(II) A RESOURCE DETERMINED BY THE LEAD AGENCY, IN ITS DISCRETION AND SUPPORTED BY SUBSTANTIAL EVIDENCE, TO BE SIGNIFICANT PURSUANT TO CRITERIA SET FORTH IN SUBDIVISION (C) OF PUBLIC RESOURCES CODE § 5024.1. IN APPLYING THE CRITERIA SET FORTH IN SUBDIVISION (C) OF PUBLIC RESOURCE CODE § 5024.1, THE LEAD AGENCY SHALL CONSIDER THE SIGNIFICANCE OF THE RESOURCE TO A CALIFORNIA NATIVE AMERICAN TRIBE.

Less than Significant with Mitigation Incorporated.

Potential future construction from implementation of the proposed Project could include demolition, site preparation, grading, building construction, architectural coating, and paving activities. Project buildout would include the development of up to 413 residential units on the paved parking lot and landscape space of the existing site and the buildout of an additional 118,474 SF of nonresidential development. Project construction would include excavation at depths that could reach native, undisturbed soils that may contain unknown tribal cultural resources. Project excavation and construction could result in impacts to inadvertent tribal cultural resource finds that could cause substantial adverse change to the significance of such resources.

AB 52 requires meaningful consultation between lead agencies and California Native American tribes regarding potential impacts on TCRs. Based on literature review (i.e., records check and archival research), no prehistoric resource sites or isolates—including a historic TCR—as defined by PRC Section 5020.1(k) have been identified within the Project site.

As described above, a SLF search and a list of Native American tribes who may have knowledge of cultural resources in the Project area was requested from the Native American Heritage Commission. On October 3, 2023, the NAHC responded with a list of Native American tribes and that the SLF search yielded negative

results for known TCRs or sacred lands within the Project area. To identify if any TCRs are potentially located within the Project site, the City sent notices to the Native American tribes provided by the NAHC on August 28, 2023, and October 26, 2023, regarding the Project.

One response was received from the Gabrieleño Band of Mission Indians – Kizh Nation on November 14, 2023. The tribe requested to consult over email and provided mitigation measures to be incorporated into the Project. As a result, Mitigation Measure TCR-1 is included, which requires prior to the commencement of ground-disturbing activities, retainment of a Native American monitor with preference given to the consulting tribe. In addition, Mitigation Measure TCR-2 is incorporated and provides procedures to follow in case of an inadvertent TCR discovery. Mitigation Measure TCR-3 is also incorporated which complies with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. These measures would ensure the avoidance of impacts to buried TCRs that may be present onsite.

No construction is proposed as part of this Project. However, future development associated with the Housing Zone would be required to adhere to Mitigation Measures TCR-1, TCR-2, and TCR-3. Implementation of Mitigation Measures TCR-1, TCR-2, and TCR-3 would ensure that potential impacts a result of the inadvertent discovery of TCRs during future development would be less than significant.

5.10.7 CUMULATIVE IMPACTS

The cumulative study area for TCRs includes City of Tustin, which contains the same general tribal historic setting. Other projects throughout the City that would involve ground disturbances could reveal buried TCRs.

Cumulative impacts to TCRs would be reduced by compliance with applicable regulations and consultations required by SB 18 and AB 52. As described above, the Project site and vicinity is not known to contain TCRs; however, Mitigation Measures TCR-1, TCR-2 and TCR-3 would be implemented to ensure that impacts would not occur in the case of an inadvertent discovery of a potential TCR. These mitigation measures would ensure that the proposed Project would not contribute to a cumulative loss of TCRs. Therefore, cumulative impacts would be less than significant.

5.10.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- California Government Code Sections 5097.9-5097.99
- California Health and Safety Code Section 7050.5
- California Public Resources Code Sections 21073 et seq. (AB 52)

Plans, Programs, or Policies

The following Plans, Programs, or Policies (PPP) related to TCRs are incorporated into the Project and would reduce impacts related to TCRs. These actions will be included in the Project's Mitigation Monitoring and Reporting Program (MMRP):

PPP TCR-1: Native American historical and cultural resources and sacred sites are protected under PRC Sections 5097.9 to 5097.991, which require that descendants be notified when Native American human remains are discovered and provide for treatment and disposition of human remains and associated grave goods.

PPP CUL-1: Human Remains. Should human remains or funerary objects be discovered during Project construction, the Project would be required to comply with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body (within a 100-foot buffer of the find) until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of notification by the NAHC.

5.10.9 PROJECT DESIGN FEATURES

None.

5.10.10 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Without mitigation, Impact TCR-1 would be potentially significant.

5.10.11 MITIGATION MEASURES

TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

a. Prior to the issuance of demolition or grading permits for any projects that would disturb previously undisturbed soils (native soils) or soils that have native fill, the project applicant/developer shall retain a Native American Monitor, with first preference given to the Gabrieleño Band of Mission Indians – Kizh Nation, who responded to the City's request for consultation on November 14, 2023 (first preference Tribe, Tribe). The applicant/developer shall allow 45 days from the initial contact with the first preference tribe to enter into a contract for monitoring services. If the applicant/developer is unable to contact the Kizh Nation after three documented attempts or is unable to secure an agreement, the applicant shall report to the lead agency, and the lead agency will contact the Kizh Nation to validate that the parties were unable to enter into an agreement. The applicant/developer shall have made three documented attempts to directly contact the Kizh Nation to enter into a tribal monitoring agreement. If the applicant/developer can demonstrate they were unable to secure an agreement with the first preference tribe, as validated and documented by the Community Development Department in writing, or if the contracted tribe fails to fulfill its obligation under the contract terms, then the applicant/developer may retain an alternative qualified tribal monitor from a culturally affiliated tribe if approved by the City.

   The monitor shall be retained prior to the issuance of a demolition permit or grading permit, and the commencement of any development related "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, auguring, grubbing, boring, grading, excavation, drilling, and trenching for the purposes of reconstruction and new development. "Ground-disturbing activity" shall not include minor maintenance activities such as potholing, tree removal, and parking lot maintenance. This mitigation measure does not apply to projects that would only disturb soils made up of artificial fill, as verified by a soils or geotechnical report.

b. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.

c. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh Nation. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the consulting tribe. If a monitor is selected from a tribe other than the Kizh Nation, the Kizh Nation shall be contacted if any discoveries are found.
d. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the consulting tribe from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities and that have the potential to impact local TCRs on the project site or in connection with the project are complete.

TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

A. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the tribal monitor and consulting archaeologist. If the consulting tribe is other than the Gabrieleño Band of Mission Indians – Kizh Nation, the Kizh Nation shall be contacted and the consulting tribe will recover and retain all discovered TCRs in the form and/or manner the Kizh Nation deems appropriate, in the Kizh Nation sole discretion, and for any purpose the Kizh Nation deems appropriate, including for educational, cultural and/or historic purposes.

TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

a. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.
b. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed.
c. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).
d. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods.
e. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

5.10.12 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Mitigation Measures identified above, along with existing regulatory programs, would reduce potential impacts associated with TCRs for Impact TCR-1 to a level that is less than significant. Therefore, no significant unavoidable adverse impacts related to TCRs would occur.

5.10.13 REFERENCES

BFSA Environmental Services. (2024). *Archaeological Resources Records Search Results for the Enderle Center Project, Tustin, California (APNs 401-252-05, -06, -08, through -10, 401-253-03, and -04).*

City of Tustin. (2018). *City of Tustin General Plan.*

OPR (Governor's Office of Planning and Research). (2005). *State of California Tribal Consultation Guidlines.*

5.11 Utilities and Service Systems

5.11.1 INTRODUCTION

This section of the EIR evaluates the potential effects on utilities and service systems from implementation of the proposed Project by identifying anticipated demand and existing and planned utility availability. This includes water supply and infrastructure, wastewater, drainage, solid waste, and dry utilities. Electric power, natural gas, telecommunications, and renewable energy resources are also described in Section 5.2, *Energy*.

Water supply and infrastructure capacity information in this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin City Code*
- *City of Tustin 2020 Urban Water Management Plan*
- *Data provided by each service provider*

Because CEQA focuses on physical environmental effects, this section analyzes whether increases in demand for water, wastewater, stormwater drainage, and solid waste utilities that would result from the proposed Project would result in significant adverse physical environmental effects. For example, physical changes in the environment resulting from the construction of new facilities or an expansion of existing wastewater facilities could constitute a significant impact under CEQA.

5.11.2 WATER

5.11.2.1 WATER REGULATORY SETTING

Safe Drinking Water Act

The United States Environmental Protection Agency (U.S. EPA) administers the Safe Drinking Water Act, which is the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The State Water Resources Control Board, Division of Drinking Water (DDW) implements the requirements of the Act and oversees public water system quality statewide. USEPA establishes legal drinking water standards for contaminants that could threaten public health.

California Urban Water Management Planning Act

Section 10610 of the California Water Code established the California Urban Water Management Planning Act (CUWMPA). CUWMPA requires urban water suppliers to initiate planning strategies to ensure an appropriate level of reliability in its water service. CUWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that annually provides more than 3,000 acre-feet of water service, should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The CUWMPA describes the contents of Urban Water Management Plan's (UWMP) as well as methods for urban water suppliers to adopt and implement the plans. As described below, the City of Tustin has an updated 2020 UWMP that addresses water supply and demand through 2045.

CALGreen Building Code

California Code of Regulations Title 24, Part 11, establishes the California Green Building Code or CALGreen. The CALGreen Code is updated every three years and sets forth water efficiency standards (i.e., maximum flow rates) for all new plumbing and irrigation fittings and fixtures. Article 8, Chapter 1, Section 8100 of the Tustin Code of Ordinances adopts the California Green Building Standards Code by reference.

Sustainable Groundwater Management Act of 2014

The 2014 Sustainable Groundwater Management Act (SGMA) requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. The Department of Water Resources (DWR) categorizes the priority of groundwater basins. For critically over-drafted basins, sustainability should be reached by 2040. For the remaining high and medium priority basins, 2042 is the deadline. The SGMA also requires local public agencies and Groundwater Sustainability Agency's in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSP) or Alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will reach long term sustainability. If a basin is adjudicated, then a GSA does not need to be formed, nor does a GSP need to be prepared.

The Project overlies the Orange County Groundwater Basin (OC Basin). Pursuant to the SGMA, the DWR has designated the OC Basin, (also known as Basin 8-1), as a medium priority basin for purposes of groundwater management. The SGMA specifically calls for Orange County Water District (OCWD), which regulates the OC Basin, to serve as the GSA. The SGMA allows Special Act Districts created by statute, such as OCWD, to prepare and submit an alternative to a GSP that is "functionally equivalent" to a GSP. Basin 8-1 includes the OCWD service area and several fringe areas outside of OCWD that are within the Basin 8-1 boundary. Per the requirements of SGMA, an Alternative Plan must encompass the entire groundwater basin as defined by DWR. On January 1, 2017, OCWD and the overlying agencies within Basin 8-1 jointly prepared and submitted an alternative plan in compliance with SGMA (Basin 8-1 Alternative). The Basin 8-1 Alternative was updated in January 2022.

City of Tustin General Plan

The Tustin General Plan Conservation/Open Space/Recreation Element includes the following goals and policies that are related to water supply and the proposed Project.

Goal 5: **Protect water quality and conserve water supply.**

Policy 5.2: Protect groundwater resources from depletion and sources of pollution.

Policy 5.3: Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.

Policy 5.4: Support the expansion of reclaimed water production and use wherever possible and economically feasible.

Policy 5.5: Protect water quality by responsible agency support of enforcement of water quality standards for water imported into the County, and to preserve the quality of water in the groundwater basin and streams.

Policy 5.6: Coordinate water quality and supply programs with all responsible water agencies, and cooperate and participate in plan preparation and programs.

Tustin City Code

Article 9, Chapter 7 – Water Efficient Landscapes. The City promotes water use efficiency through water efficient landscape requirements which were adopted by Ordinance in December 2015. The Code applies to new landscape projects 500 square feet or greater and rehabilitated landscape projects 2,500 square feet or greater. The code section provides implementation procedures and water use standards for the purpose of providing water efficient landscapes in compliance with State law.

Article 4, Chapter 10 – Water Management Plan. The City created a comprehensive Water Conservation Program pursuant to the California Water Code based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortages. The Water Conservation Program establishes permanent water use restrictions and regulations to be implemented during times of declared water shortages. It establishes six (6) levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

5.11.2.2 WATER ENVIRONMENTAL SETTING

Water is supplied to the Project site by the City of Tustin. The City is a retail water supplier that provides water to its residents and other customers using the imported potable water from Municipal Water District of Orange County (MWDOC), obtained through East Orange County Water District (EOCWD), and local groundwater from the Orange County Groundwater Basin (OC Basin), which is managed by the Orange County Water District (OCWD) (Arcadis U.S., Inc. , 2020).

Water Supply and Demand

The City's water supply consists of a combination of imported water and local groundwater. The City's main source of water supply is groundwater from the OC Basin. In 2020, the City's actual water supply totaled 10,447 acre-feet (AF), which included 7,034 AF of untreated groundwater and 3,038 AF desalinated groundwater from OC Basin, and 375 AF of imported water from MWDOC/EOCWD.

The City's 2020 UWMP forecasts that by 2045 the City's water supply mix will shift to 85 percent groundwater and 15 percent imported water. Table 5.11-1 provides the City's total projected water supply capacities expected to be available through 2045.

Table 5.11-1: Tustin Projected Water Supply

Source		Projected Water Supply (acre-feet)				
		2025	2030	2035	2040	2045
Groundwater desalinated)	Orange County Groundwater Basin	8,569	8,604	8,521	8,440	8,413
Purchased or Imported Water	MWDOC / EOCWD	1,512	1,518	1,504	1,489	1,489
Total Projected Water Supplies		**10,081**	**10,122**	**10,025**	**9,929**	**9,898**

Source: (Arcadis U.S., Inc. , 2020)

The City's water demand in 2021 was 10,374 AF, and is projected to decrease to 10,081 AF by 2025 (Arcadis U.S., Inc. , 2020). The 2020 UWMP also describes that water demands per capita have been decreasing in recent years due to new state and local regulations related to water conservation. The 2020 UWMP describes that Tustin Water Department customers used 95 gallons per capita per day (GPCD) in 2020, which is below the target of 151 GPCD for 2020 (Arcadis U.S., Inc. , 2020). As shown in Table 5.11-2, the 2020 UWMP indicates that the City has supply capabilities that would be sufficient to meet demands

from 2025 to 2045 under the normal, single dry-year, and multiple dry years. Thus, the City would continue to be able to utilize imported water supply as needed.

Table 5.11-2: Water Supply and Demand During Normal, Dry, and Multiple Dry Year Scenarios (AF)

Forecast Year	2025	2030	2035	2040	2045
Normal Year					
Supply Totals (AF)	10,081	10,122	10,025	9,929	9,898
Demand Totals (AF)	10,081	10,122	10,025	9,929	9,898
Difference (AF)	0	0	0	0	0
Single-Dry Year					
Supply Totals (AF)	10,686	10,729	10,627	10,525	10,491
Demand Totals (AF)	10,686	10,729	10,627	10,525	10,491
Difference (AF)	0	0	0	0	0
Multiple-Dry Years (First Year)					
Supply Totals (AF)	10,996	10,695	10,709	10,606	10,518
Demand Totals (AF)	10,996	10,695	10,709	10,606	10,518
Difference (AF)	0	0	0	0	0
Multiple-Dry Years (Second Year)					
Supply Totals (AF)	10,919	10,703	10,688	10,586	10,511
Demand Totals (AF)	10,919	10,703	10,688	10,586	10,511
Difference (AF)	0	0	0	0	0
Multiple-Dry Years (Third Year)					
Supply Totals (AF)	10,841	10,712	10,668	10,565	10,505
Demand Totals (AF)	10,841	10,712	10,668	10,565	10,505
Difference (AF)	0	0	0	0	0
Multiple-Dry Years (Fourth Year)					
Supply Totals (AF)	10,763	10,721	10,647	10,545	10,498
Demand Totals (AF)	10,763	10,721	10,647	10,545	10,498
Difference (AF)	0	0	0	0	0
Multiple-Dry Years (Fifth Year)					
Supply Totals (AF)	10,686	10,729	10,627	10,525	10,491
Demand Totals (AF)	10,686	10,729	10,627	10,525	10,491
Difference (AF)	0	0	0	0	0

Source: (Arcadis U.S., Inc. , 2020)

Groundwater: In Fiscal Year (FY) 2019-20, the City relied on approximately 10,072 AFY (approximately 96 percent of the City's water supply portfolio for FY 2019-20) from the OC Basin to meet its demands. The OC Basin covers an area of approximately 350 square miles, bordered by the Puente Hills and Chino Hills to the north, the Santa Ana Mountains to the northeast, and the Pacific Ocean to the southwest. The basin boundary extends to the Orange-Los Angeles county line to the northwest. Replenishment supplies for the OC Basin include capture of increasing Santa Ana River flows, purified recycled water, purchases of replenishment water from Metropolitan, and expansion of local supplies.

The OC Basin is not adjudicated and as such, pumping from the OC Basin is managed through a process that uses financial incentives to encourage groundwater producers to pump a sustainable amount of water. OCWD manages the OC Basin through a Basin Production Percentage (BPP) that is determined each water year based on groundwater conditions, availability of imported water supplies, water year precipitation, Santa Ana River runoff, and basin management objectives. While there is no legal limit as to how much an agency pumps from the OC Basin, there is a financial disincentive to pump above the BPP. Groundwater production above the BPP is charged a Basin Equity Assessment (BEA) fee. The BEA is set so that the cost of groundwater pumping above the BPP is greater than the cost of imported water. Each year, OCWD sets a target amount of pumping, the BPP, and assesses a BEA on all water pumped above that limit. For example, if the BPP is set at 77 percent for 2023-2024, all pumpers within the Basin, including the City, can supply 77 percent of their water needs from groundwater supplies at a cost significantly less than the cost of imported water. If groundwater production is equal to or less than the BPP (i.e., less than 77 percent in the example above), all producers within the Basin pay a replenishment assessment fee which is used to fund groundwater replenishment and recharge programs aimed at ensuring the long-term viability and stability of the Basin. A component of OCWD's BPP policy is to manage the groundwater basin so that the BPP will not fluctuate more that 5 percent from year to year.

Imported Water: Approximately 4 percent of the City's potable water needs are met by imported water purchased from EOCWD (who purchases from the Metropolitan Water District of Southern California [MET] through MWDOC). MET's principal sources of water are the Colorado River via the Colorado River Aqueduct (CRA) and the Lake Oroville watershed in Northern California through the State Water Project (SWP).

Surface Water: Currently, there are no direct surface water uses in the City's service area. As of 2021, there are no planned direct uses of surface water in the City's service area (Arcadis U.S., Inc. , 2020).

Recycled Water: There are currently no direct recycled water uses within the City's service area.

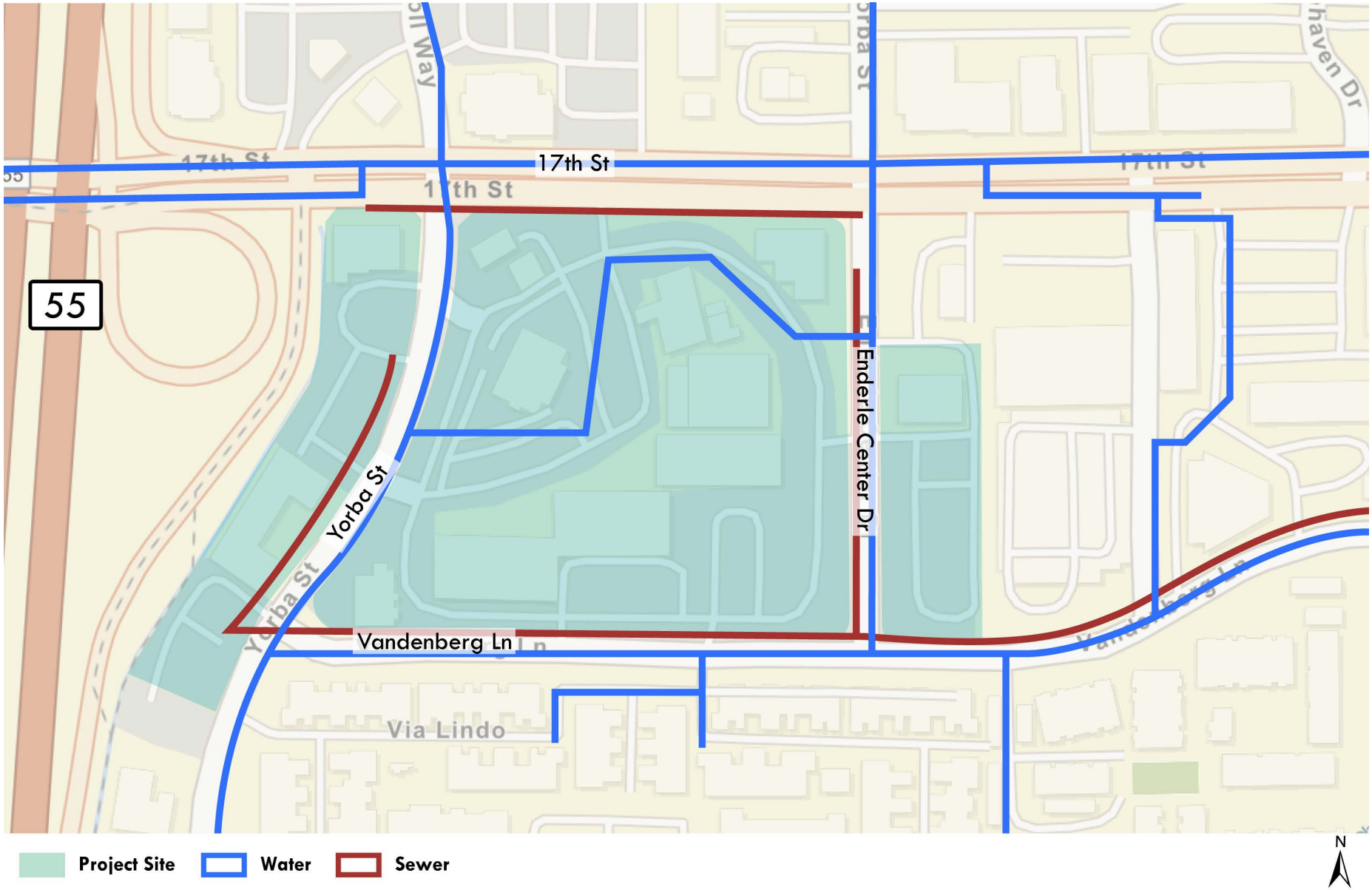
Water Exchanges and Transfers: The City maintains interconnections with other agencies result in the ability to share water supplies during short term emergency situations or planned shutdowns of major imported water systems. Currently, the City maintains four emergency interconnections with Golden State Water Company, the City of Santa Ana, and Irvine Ranch Water District. All four connections are six inches in diameter, need to be manually activated, and supply flow in both directions.

Water Infrastructure

The City operates 13 wells, six reservoirs with a combined storage capacity of approximately 13.83 million gallons (MG) and manages a 172-mile water mains system with 14,341 service connections (Arcadis U.S., Inc. , 2020). Existing water lines adjacent to the Project site are shown in Figure 5.11-1, *Utilities*.

This page intentionally left blank.

Existing Utilities



Enderle Center Rezone Project
City of Tustin

Figure 5.11-1

This page intentionally left blank.

5.11.2.3 WATER THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-1 Require or result in the construction of new water facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.

UT-2 Have sufficient water supplies available to serve the project and reasonably foreseeable development during normal, dry, and multiple dry years.

HYD-1 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

HYD-2 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

5.11.2.4 WATER SERVICE METHODOLOGY

The evaluation of water supply considers the amount of water that would be required to support operation of the proposed Project and compares the demand to the City's available water supply to identify if sufficient water supplies are available to serve the proposed Project and reasonably foreseeable development during normal, dry, and multiple dry years. Additionally, the water supply infrastructure in the Project area was identified and evaluated to ensure design capacity would be adequate to supply the Project site, or if expansions would be required to serve the proposed development.

5.11.2.5 WATER ENVIRONMENTAL IMPACTS

IMPACT UT-1: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW WATER FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact with Mitigation. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a General Plan Amendment (GPA), Zone Code Amendment (CA) and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of the Project site with up to 413 housing units over approximately seven acres of developable land within the existing 11.8-acre site, consistent with the City's certified 2021-2029 Housing Element. Additionally, the Project anticipates the future nonresidential capacity buildout of 118,474 SF within the remaining nonresidential-designated area of the Project site. A specific development project is not proposed as part of this Project.

The water facilities currently serving the Project site would likely be sufficient to accommodate the anticipated 118,474 SF of additional nonresidential development proposed by the Project, as the additional nonresidential square footage is the remaining development potential for the Project site authorized by the City's General Plan Land Use Element. However, future residential projects proposed under the Project could necessitate further water infrastructure, including new water connections, water pumps, and other improvements to water utilities within the existing Project site footprint and within adjacent utility right-of-way beneath 17th Street, Yorba Street, Enderle Center Drive and Vandenberg Lane. Local improvements are anticipated, and extensive offsite utility improvements are not assumed for the Project.

Future implementation of development projects pursuant to the proposed Project would include installation of onsite water infrastructure and new connections to the water distribution system that would be sized to

accommodate the increased water demand of new project-specific development on a project-by-project basis. Water supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of water distribution facilities and would be verified during plan check (PPP UT-1). Additionally, Mitigation Measure UT-1 is incorporated into the Project to require future projects to coordinate with the City and prepare a capacity analysis of existing water utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by the City prior to the approval of construction permits.

Under the City's normal development review procedure for individual projects, the City determines the actual water system design requirements of each site-specific development project, and the needs for any improvements to the existing water supply infrastructure would be identified and required by the City construction permit. The temporary construction of needed water system improvements would occur along existing pipeline alignments and within existing street rights-of-way, and would be required to comply with all City standards regarding construction noise, air quality and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls. Implementation of PPP HYD-1 would ensure that potential construction impacts related to any needed water line improvements remain less than significant. Further, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for a Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. As a result, potential impacts related to build out of the proposed Project would not result in construction of new or expanded water facilities that would result in a significant environmental effect. Therefore, impacts would be less than significant.

IMPACT UT-2: TUSTIN WATER DEPARTMENT WOULD HAVE SUFFICIENT WATER SUPPLIES AVAILABLE TO SERVE THE PROJECT AND REASONABLY FORESEEABLE DEVELOPMENT DURING NORMAL, DRY, AND MULTIPLE DRY YEARS.

IMPACT HYD-1: THE PROJECT WOULD NOT SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN.

IMPACT HYD-2: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN.

Less than Significant Impact. The proposed Project would allow up to 413 residential units and 118,474 SF of non-residential uses, which would result in increased generation of water demand. As described in Section 5.06, *Population and Housing*, the 413 additional residential units would generate 1,189 residents at build out and full occupancy; and the 118,474 SF of non-residential uses is estimated to generate 365 employees.

Water Supply and Demand

Based on the City's water use per day in 2020 of 95 gallons per capita, the estimated 1,189 residents and 365 employees would generate an additional water demand of 147,630 gallons per day or 165.5 acre-feet per year (AFY). Based on the City's UWMP supply and demand data and the limited increase in water demand from the proposed Project, the City would have water supplies available to serve the Project. Additionally, as shown in Table 5.11-2, the City would have sufficient water supplies to serve the Project and cumulative development during normal, dry, and multiple dry year scenarios through 2045. Therefore, implementation of the proposed Project would result in a less than significant impact related to water supplies.

Groundwater

The Project site is fully developed and is nearly 100 percent impervious aside from some landscaped areas. Therefore, implementation of the proposed Project would not change the amount of impervious surface or interfere with the rate of groundwater recharge at the Project site compared to existing conditions. Further, the Project site is not in or near a groundwater recharge area/facility, nor does it represent a source of groundwater recharge. Therefore, the Project would not substantially interfere with groundwater supplies or recharge. Impacts would be less than significant.

OCWD serves as the groundwater manager over the OC Basin and sub-basins. OCWD adopted its first Groundwater Management Plan in 1989. In July 2015, OCWD updated the Groundwater Management Plan; however, this plan has been superseded by the Basin 8-1 Alternative Plan which was adopted in 2022. As described previously, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge. Therefore, the Project would not conflict or obstruct the implementation of the Basin 8-1 Alternative Plan. Additionally, groundwater supply and demand is evaluated through the City's 2020 UWMP which determined groundwater supplies are sufficient to serve the City's service area through 2045. Therefore, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

5.11.2.6 WATER CUMULATIVE IMPACTS

The geographic scope of cumulative analysis for water service is the service area of the City. Cumulative water supply impacts are associated with the adequacy of the City's primary sources of water, which include groundwater pumped from the OC Basin and supplemental imported water supplied by EOCWD through the MWDOC. As described above, water supplies have been planned through the City's 2020 UWMP, which identifies the ability to meet a majority of future water demands through groundwater and imported supplies. The City's UWMP provides projections for water supply and demand through 2045, and shows that in normal, dry, and multiple dry year conditions with anticipated growth in the City's service area, the City of Tustin Water Department would be able to meet water demand. As a result, cumulative impacts would be less than significant.

5.11.2.7 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

The following standard regulations would reduce potential impacts related to water:

- California Code of Regulations Title 24, Part 11; the California Green Building Code
- Tustin City Code Article 9, Chapter 7; Water Efficient Landscapes
- Tustin City Code Article 4, Chapter 10; Water Management Plan

Plans, Programs, or Policies

PPP UT-1: California Building Code. All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements.

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB).

The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.11.2.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With implementation of Mitigation Measure UT-1 and existing regulatory requirements that would be ensured through the City's development permitting process, Impact UT-1 would be less than significant. With implementation of existing regulatory requirements that would be ensured through the City's development permitting process, Impacts UT-2, HYD-1 and HYD-2 would be less than significant.

5.11.2.9 WATER MITIGATION MEASURES

MM UT-1 Future proposed Projects shall prepare capacity analyses of existing water utilities in the area to ensure conveyance and pressure is adequate for future projects proposed. The developer shall then identify infrastructure improvements necessary for the proposed development. The developer will be responsible for preparing a capacity analysis in coordination with the City. The capacity analysis and infrastructure improvements shall be reviewed and approved by the City prior to approval of the construction permit.

5.11.2.10 WATER LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to water supplies or water infrastructure would occur.

5.11.3 WASTEWATER

5.11.3.1 WASTEWATER REGULATORY SETTING

National Pollution Discharge Elimination System Permit

The NPDES permit system was established in the Federal Clean Water Act to regulate both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the U.S. For point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge.

State Water Resources Control Board Statewide General Waste Discharge Requirements for Sewer Systems

The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SWRCB Order No 2006-0003-DWQ) applies to sanitary sewer systems that are greater than one mile long and collect or convey untreated or partially treated wastewater to a publicly owned treatment facility. The goal of Order No. 2006-0003 is to provide a consistent statewide approach for reducing Sanitary Sewer Overflows

(SSOs), which are accidental releases of untreated or partially treated wastewater from sanitary sewer systems, by requiring that:

1. In the event of an SSO, all feasible steps be taken to control the released volume and prevent untreated wastewater from entering storm drains, creeks, etc.
2. If an SSO occurs, it must be reported to the SWRCB using an online reporting system developed by the SWRCB.
3. All publicly owned collection system agencies with more than one mile of sewer pipe in the state must develop a Sewer System Management Plan (SSMP), which must be updated every five years.

EOCWD has updated its SSMP in compliance with these requirements in 2019.

City of Tustin General Plan

The Tustin General Plan does not contain goals and policies related to wastewater.

5.11.3.2 WASTEWATER ENVIRONMENTAL SETTING

Wastewater services are provided to the Project site by EOCWD. In 2020, EOCWD collected approximately 360 AF of wastewater (Arcadis U.S., Inc., 2020).

EOCWD's sewer system service area encompasses about 7,780 acres and includes portions of the Cities of Orange and Tustin and unincorporated communities of North Tustin, Lemon Heights, Cowan Heights, and Panorama Heights in the County of Orange.

EOCWD's wastewater system includes 171 miles of sewer lines and 3,700 manholes, serving about 18,000 customers. The gravity collection system conveys wastewater to points of connection with the wastewater systems owned by the City of Orange, Irvine Ranch Water District (IRWD), and OC San.

EOCWD coordinates with Orange County Sanitation District (OC San) and OCWD for wastewater and recycled water services. EOCWD does not own or operate its own wastewater treatment facilities and sends all collected wastewater to OC San for treatment and disposal. Wastewater collected within EOCWD's service area is conveyed to OC San's wastewater treatment plants in Fountain Valley (Plant No. 1) and Huntington Beach (Plant No. 2). Plant No. 1 has a total rated primary capacity of 108 MGD and a secondary treatment capacity of 80 MGD. Plant No. 2 has a rated primary capacity of 168 MGD and secondary treatment capacity of 90 MGD.

Wastewater from the Project site is treated at OC San's Plant No. 1 in Fountain Valley. Enderle Center is currently served by the existing 8-inch diameter sewer lines in 17th Street, Yorba Street, Enderle Center Drive, and Vandenberg Lane.

Existing wastewater lines adjacent to the Project site are shown in Figure 5.11-1, *Utilities*.

5.11.3.3 WASTEWATER THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-3 Require or result in the construction of new wastewater facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects; or

UT-4 Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

5.11.3.4 WASTEWATER SERVICE METHODOLOGY

The evaluation of wastewater infrastructure quantifies the amount of wastewater that would be generated from operation of the proposed Project and compares the demand to the existing and planned sewer infrastructure in the Project area, and the wastewater treatment plant that treats flows from the Project site. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

5.11.3.5 WASTEWATER ENVIRONMENTAL IMPACTS

IMPACT UT-3: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW WASTEWATER FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact with Mitigation. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA, CA, and a HO district to allow for future development of the Project site with up to 413 housing units over approximately seven acres of developable land within the existing 11.8-acre site, consistent with the City's certified 2021-2029 Housing Element. Additionally, the Project anticipates the future nonresidential capacity buildout of 118,474 SF within the remaining nonresidential-designated area of the Project site. A specific development project is not proposed as part of this Project.

The wastewater facilities currently serving the Project site would likely be sufficient to accommodate the anticipated 118,474 SF of additional nonresidential development proposed by the Project, as the additional nonresidential square footage is the remaining development potential contained within the City's General Plan Land Use Element. However, future residential projects proposed under the Project could necessitate further wastewater infrastructure, including new wastewater connections, sewer pumps, and other improvements to wastewater utilities within the existing Project site footprint and within adjacent utility right-of-way beneath 17th Street, Yorba Street, Enderle Center Drive, and Vandenberg Lane. Local improvements are anticipated, and extensive offsite utility improvements are not assumed for the Project.

Future implementation of development projects pursuant to the proposed Project would include installation of onsite wastewater infrastructure and new connections to the wastewater distribution system that would be sized to accommodate the increased wastewater demand of new project-specific development on a project-by-project basis. Wastewater supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of wastewater distribution facilities and would be verified during plan check (PPP UT-1). Additionally, Mitigation Measure UT-2 is incorporated into the Project to require future projects to coordinate with EOCWD and prepare a capacity analysis of existing wastewater utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by EOCWD and the City prior to the approval of construction permits.

Under the City's normal development review procedure for individual projects, the City determines the actual wastewater system design requirements of each site-specific development project, and the needs for any improvements to the existing wastewater supply infrastructure would be identified and required by the City construction permit. The temporary construction of needed wastewater system improvements would occur along existing pipeline alignments and within existing street rights-of-way, and construction sites and would be required to comply with all City standards regarding construction noise, air quality and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls. Implementation of PPP HYD-1 would ensure that potential construction impacts related to any needed water line improvements remain less than significant. Further, PPP T-2 is incorporated into the Project

to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. As a result, potential impacts related to buildout of the proposed Project would not result in construction of new or expanded wastewater facilities that would result in a significant environmental effect. Therefore, impacts would be less than significant.

IMPACT UT-4: THE PROJECT WOULD RESULT IN A DETERMINATION BY THE WASTEWATER TREATMENT PROVIDER THAT WOULD SERVE THE PROJECT THAT IT HAS ADEQUATE CAPACITY TO SERVE THE PROJECTS PROJECTED DEMAND IN ADDITION TO EXISTING COMMITMENTS.

Less than Significant Impact with Mitigation. Future buildout of the proposed Project would result in an increase of wastewater generation from the site. Using EOCWD's wastewater flow factors, residential uses use approximately 100 gallons per day per dwelling unit (gpd/du) and non-residential uses use approximately 2,500 gallons per 1 per day per acre (gpd/ac) (J. Smyth, personal communication, March 27, 2024). Therefore, the estimated 413 residential dwelling units and 118,474 SF of nonresidential employees would generate an additional wastewater demand of 21,100 gallons per day or 23.7 AFY.

Wastewater from the Project Site is treated at OC San's wastewater treatment plant in Fountain Valley (Plant No. 1). Plant No. 1 has a total rated primary capacity of 108 MGD and a secondary treatment capacity of 80 MGD. Thus, the amount of wastewater that would be generated by the proposed Project is less than 1 percent of Plant No. 1's total remaining daily treatment capacity. As a result, the wastewater treatment plant serving the Project would have adequate capacity to serve the proposed Project's demand in addition to existing service commitments, and impacts would be less than significant.

Additionally, Mitigation Measure UT-2 is incorporated into the Project to require future projects to coordinate with EOCWD and prepare a capacity analysis of existing wastewater utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by EOCWD and the City prior to the approval of construction permits. With implementation of Mitigation Measure UT-2, impacts would be less than significant.

5.11.3.6 WASTEWATER CUMULATIVE IMPACTS

Cumulative wastewater infrastructure impacts are considered on a systemwide basis and are associated with the overall capacity of existing and planned infrastructure. The cumulative system evaluated includes the sewer system and the conveyance system through wastewater disposal at the OC San's Wastewater Treatment. As described previously, with the proposed Project, the sewer system would have sufficient capacity to handle the increased flows resulting from implementation of the proposed Project. The continued regular assessment, maintenance, and upgrades of the sewer system by EOCWD would reduce the potential of cumulative development projects to result in a cumulatively substantial increase in wastewater such that new or expanded facilities would be required. Thus, increases in wastewater in the sewer system would result in a less than significant cumulative impact.

5.11.3.7 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- California Code of Regulations Title 24, Part 11; the California Green Building Code

Plans, Programs, or Policies

PPP UT-1: California Building Code. All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements.

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.11.3.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts UT-3 would be potentially significant and UT-4 would be less than significant.

5.11.3.9 WASTEWATER MITIGATION MEASURES

MM UT-2 Future proposed Projects shall prepare capacity analyses of existing sewer utilities in the area to ensure conveyance and pressure is adequate for future projects proposed. The developer shall then identify infrastructure improvements necessary for the proposed development. The developer will be responsible for preparing a capacity analysis in coordination with the EOCWD and the City. The capacity analysis and infrastructure improvements shall be reviewed and approved by EOCWD and the City prior to approval of the construction permit.

5.11.3.10 WASTEWATER LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to wastewater infrastructure would occur.

5.11.4 DRAINAGE

5.11.4.1 DRAINAGE REGULATORY SETTING

Santa Ana Regional Municipal Separate Storm Sewer System Permit

The Municipal Separate Storm Sewer System (MS4) Permit (Order No. R8-2009-0030) for the Santa Ana Region regulates urban runoff from areas under jurisdiction of the Permit's various permittees, which include Orange County, Orange County Flood Control District, and the incorporated cities within Orange County, including the City of Tustin. When discharged, urban runoff (or stormwater) has the potential to mix with and carry various pollutants into receiving waters. The Permit lists allowable and unallowable discharges and requires implementation of Low Impact Development (LID) infrastructure, which are engineered facilities that

are designed to retain and/or biotreat runoff on the project site. Developments that qualify as New Development or Significant Redevelopment projects are considered priority projects and are required to develop a site-specific water quality management plan (WQMP), which includes site design, source control, and treatment control elements to reduce the discharge of pollutants in runoff. The WQMP is required to be approved prior to the issuance of a building or grading permit, and post-construction best management practices (BMPs) are required to be implemented. The MS4 Permit requires priority projects to infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile of a 24-hour storm event (Design Capture Volume). The MS4 Permit also requires the evaluation and use of LID features using the following hierarchy of treatment: infiltration, evapotranspiration, harvest/reuse, and biotreatment.

Biotreatment BMPs are a broad class of LID BMPs that reduce stormwater volume to the maximum extent practicable, treat stormwater using a suite of treatment mechanisms characteristic of biologically active systems, and discharge water to the downstream storm drain system or directly to receiving waters. Treatment mechanisms include media filtration (through biologically-active media), vegetative filtration (straining, sedimentation, interception, and stabilization of particles resulting from shallow flow through vegetation), general sorption processes (i.e., absorption, adsorption, ion exchange, precipitation, surface complexation), biologically-mediated transformations, and other processes to address both suspended and dissolved constituents. Examples of biotreatment BMPs include bioretention with underdrains, vegetated swales, constructed wetlands, and proprietary biotreatment systems.

County of Orange Drainage Area Management Plan

The Drainage Area Management Plan (DAMP) is the County's primary policy, planning and implementation document for NPDES Permit compliance. The DAMP describes the agreements, structures and programs that:

- Provide the framework for the program management activities and plan development;
- Provide the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensure that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues;
- Ensure that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects (or priority projects) develop and implement a Preliminary WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. The WQMP is required to be prepared in accordance with the North Orange County Technical Guidance Document (TGD), which is provided as exhibit 7.III to the DAMP.

City of Tustin General Plan

The Land Use Element includes the following policy related to drainage facilities:

Goal 8: **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

Policy 8.5: Continue to make incremental improvements to the flood control and drainage system.

The Conservation/Open Space/Recreation Element includes the following policy related to drainage facilities:

Goal 8: **Conserve and protect significant topographical features, important watershed areas, resources, and soils.**

Policy 8.2: Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage improvements.

Tustin City Code

Article 4, Chapter 8 – Floodplain Management.

Article 4, Chapter 9, Section 4902 - Control of Urban Runoff. This code section states that all new development and significant redevelopment within the City shall be undertaken in accordance with the County Drainage Area Management Plan (DAMP) and any conditions and requirements established by the City Community Development Department and Public Works Department, which are reasonably related to the reduction or elimination of pollutants in storm water runoff from the project site. Prior to the issuance by the City of a grading permit, building permit or nonresidential plumbing permit for any new development or significant redevelopment, the City Community Development Department shall review the project plans and impose terms, conditions, and requirements on the project.

5.11.4.2 DRAINAGE ENVIRONMENTAL SETTING

Storm Drainage Facilities

The Project site is currently developed with commercial uses. The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains. Stormwater drains to the southeast corner of the site into a catch basin at the Vanderberg Lane and Enderle Center Drive intersection. The storm drain then continues east and connects to the existing Orange County Flood Control District (OCFCD) facility located between Enderle Center Drive and Prospect Avenue. Because the site is currently almost entirely paved, future development would increase intensity of development, but would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff.

5.11.4.3 DRAINAGE THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-5 Require or result in the construction of new stormwater drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.

5.11.4.4 DRAINAGE METHODOLOGY

The evaluation of stormwater drainage infrastructure quantifies the amount of impervious surfaces and stormwater runoff that would be generated from the proposed Project and identifies if runoff from the proposed Project would be accommodated by the existing stormwater drainage infrastructure. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

5.11.4.5 DRAINAGE ENVIRONMENTAL IMPACTS

IMPACT UT-5: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW DRAINAGE FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA, CA, and a HO district to allow for future development of up to 413 housing units over a maximum area of seven (7) acres within the existing 11.8-acre site, consistent with the City's certified 2021-2029 Housing Element. Additionally, the Project anticipates the future nonresidential capacity buildout of 118,474 SF within the remaining nonresidential-designated area of the Project site. A specific development project is not proposed as part of this Project.

The Project site is fully developed and is nearly 100 percent impervious aside from some landscaped areas. Therefore, implementation of the proposed Project would not change the amount of impervious surface and would not substantially change the amount of storm water runoff, and is not anticipated to exceed capacity of the existing stormwater drainage system.

Future implementation of development projects pursuant to the proposed Project would include installation of onsite storm drain infrastructure and new connections to the existing storm drain system that would be sized to accommodate the storm drain water demand of new project-specific development on a project-by-project basis. Local improvements are anticipated, and extensive offsite utility improvements are not assumed for the Project.

Additionally, the City's MS4 permit and County Drainage Area Management Plan (DAMP) require new development projects to prepare a WQMP (PPP HYD-3) that is required to include BMPs to reduce the potential of stormwater pollutants through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for sources of polluted runoff. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to stormwater runoff would be less than significant.

Under the City's normal development review procedure for individual projects, the City determines the actual storm drain system design requirements of each site-specific development project, and the needs for any improvements to the existing water supply infrastructure would be identified and required by the City construction permit. The temporary construction of needed storm drain system improvements would occur along existing pipeline alignments and within existing street rights-of-way, and would be required to comply with all City standards regarding construction noise, air quality and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls. Implementation of PPP HYD-1 would ensure that potential construction impacts related to any needed water line improvements remain less than significant. Further, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. As a result, potential impacts related to buildout of the proposed Project would not result in construction of new or expanded stormwater drainage facilities that would result in a significant environmental effect.

Further, the Project site is included in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0164J (Federal Emergency Management Agency, 2009). The Project site is within an area designated as Zone X, areas of 0.2 percent annual chance of flood; areas of 1 percent annual chance of flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood. Therefore, the Project site is not currently within a designated flood zone.

As described above, the Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Therefore, future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions. Therefore, impacts would be less than significant.

5.11.4.6 DRAINAGE CUMULATIVE IMPACTS

The geographic scope for cumulative impacts related to stormwater drainage includes the geographic area served by the existing stormwater infrastructure for the Project area, from capture of runoff through final discharge points. As described above, the proposed Project would not cause a substantial change in the amount of stormwater runoff from the Project site. As a result, the proposed Project would not generate additional runoff that could combine with runoff from cumulative projects that could cumulatively combine to impact drainage. Thus, cumulative impacts related to drainage would be less than significant.

5.11.4.7 EXISTING REGULATIONS AND PLANS, PROGRAMS OR POLICIES

Plans, Programs or Policies

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-3 WQMP. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.11.4.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact UT-5 would be less than significant.

5.11.4.9 DRAINAGE MITIGATION MEASURES

No new mitigation measures are required for the proposed Project.

5.11.4.10 DRAINAGE LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to drainage would occur.

5.11.5 SOLID WASTE

5.11.5.1 SOLID WASTE REGULATORY SETTING

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

California Assembly Bill 939

The California Integrated Waste Management Act (AB 939) made all California cities, counties, and approved regional solid waste management agencies responsible for enacting plans and implementing programs to divert 25 percent of their solid waste by 1995 and 50 percent by year 2000. Later legislation mandates the 50 percent diversion requirement be achieved every year.

California Assembly Bill 341

On October 6, 2011, Governor Brown signed AB 341 establishing a state policy goal that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020, and requiring CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal. AB 341 also requires businesses and multi-family residential dwellings of five units or more, that generate four or more cubic yards of commercial solid waste per week to implement recycling programs.

California Assembly Bill 1826

On September 28, 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, dependent on the amount of waste generated per week. This law requires that local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings that consist of five or more units.

California Assembly Bill 827

Signed into law by Governor Newsom in 2019, AB 827 requires businesses subject to AB 1826 and AB 341 starting July 1, 2020, to provide customers with easily accessible recycling and organics collection bins or containers to collect these materials generated from products purchased on the premises.

California Senate Bill 1383

On September 19, 2016, Governor Brown signed SB 1383 establishing regulations aimed to reduce organic waste disposal 75 percent and reduce least 20 percent of currently disposed surplus edible food by 2025. The intent of the law is to reduce methane, increase landfill usage, and provide additional food sources for Californians.

California Green Building Standards

Section 5.408.1 Construction waste diversion. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste.

Section 5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

City of Tustin General Plan

The City's General Plan Conservation/Open Space/Recreation Element contains the following goals and policies related to solid waste services.

Goal 10: Reduce solid waste produced within City.

Policy 10.1: Implement policies of the adopted Tustin Source Reduction and Recycling Element and Household Hazardous Waste Management Element.

Policy 10.2: Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.

Policy 10.3: Maximize public awareness of all source reduction programs, including opportunities for community feedback and school education.

Policy 10.4: Maximize integration of all source reduction programs.

Policy 10.5: Assist in the development of local, regional, and statewide markets for materials collected and processed through the source reduction programs.

Tustin City Code

Tustin City Code Article 4, Chapter 3, Part 1, covers the general provisions regarding solid waste handling in order to protect the public health, safety and welfare and to meet the City's obligations under the California Integrated Waste Management Act of 1989 (AB 939). It also covers the provisions of the Mandatory Commercial Recycling requirements detailed in AB 341, the Mandatory Commercial Organics Recycling requirements detailed in AB 1826, the Mandatory Organics Collection requirements detailed in SB 1383 and Customer Access to Recycling requirements detailed in AB 827.

5.11.5.2 SOLID WASTE ENVIRONMENTAL SETTING

The two closest landfills to the Project site are the Frank R. Bowerman Landfill in Irvine and the Olinda Alpha Sanitary Landfill in Brea. The Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In January 2024, the maximum tonnage received was 8,710.78 tons. Thus, the facility had additional capacity of 2,789.22 tons per day (CalRecycle, 2024). Per a Solid Waste Facility Permit (SWFP) issued on July 8, 2021, the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. The Olinda Alpha Sanitary Landfill is permitted to operate through 2036. In January 2024, the maximum tonnage received was 8,404 tons, which is below the 10,000 tons per day that the facility is allowed to receive for 36 days of the year (CalRecycle, 2024). Thus, the Olinda Alpha Sanitary Landfill has additional capacity to accept solid waste that may be generated by the Project.

5.11.5.3 SOLID WASTE THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-6 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

UT-7 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

5.11.5.4 SOLID WASTE METHODOLOGY

Solid waste generation from operation of the proposed Project was estimated using 2022.1 CalEEMod solid waste generation factors derived for multi-family residential and commercial uses. Solid waste volumes were then compared with recent estimates of remaining disposal capacity of the landfill serving the City. In addition, potential impacts related to compliance with solid waste regulations were evaluated by identifying how the proposed Project would implement the relevant requirements.

5.11.5.5 SOLID WASTE ENVIRONMENTAL IMPACTS

IMPACT UT-6: THE PROJECT WOULD NOT GENERATE SOLID WASTE IN EXCESS OF STATE OR LOCAL STANDARDS, OR IN EXCESS OF THE CAPACITY OF LOCAL INFRASTRUCTURE, OR OTHERWISE IMPAIR THE ATTAINMENT OF SOLID WASTE REDUCTION GOALS.

IMPACT UT-7: THE PROJECT WOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STATUTES AND REGULATIONS RELATED TO SOLID WASTE.

Less than Significant Impact.

The Project does not propose a specific development project; however, the Project would facilitate future residential development within the Project site where it is not currently permitted. As such, future development within the Project site would generate an incremental increase in solid waste volumes requiring off-site disposal during short-term construction and long-term operational activities. Users of solid waste collection and disposal services would be required to pay service fees to the City's waste collection provider. As discussed above, solid waste generated by future development within the Project site could be disposed of at the Frank R. Bowerman Landfill and Olinda Alpha Sanitary Landfill.

A specific development project is not proposed at this time; however, implementation of the proposed Project could result in the construction of 413 residential units and 118,474 SF of nonresidential development.

Construction

Future implementing project construction would generate solid waste for landfill disposal in the form of packaging and discarded materials that would be removed from the site. Construction waste would be properly characterized as required by law and recycled or disposed of at an appropriate type of landfill for such materials. Section 5.408.1 of the 2022 California Green Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Thus, the construction solid waste that would be disposed of at the landfill would be approximately 35 percent of the waste generated. As described above, Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. Both of these landfills would be able to accommodate the construction solid waste from the proposed Project. Therefore, impacts related to landfill facilities from construction activities would be less than significant.

Operation

Using solid waste generation rates provided by CalEEMod, operation of the proposed Project at buildout would generate approximately 227.65 tons of solid waste per year, at least 75 percent of which is required by California law to be recycled, which would reduce the volume of landfilled solid waste to approximately 56.9 tons per year, or 1.1 tons per week, as shown on Table 5.11-3.

Table 5.11-3: Solid Waste Demand from Operation of the Proposed Project

Land Use	Quantity	Generation Rate	Solid Waste Demand
Residential	413 units	0.25 tons/unit/year	103.25 tons per year
Nonresidential	118,474 SF	1.05 tons/1,000 SF/year	124.4 tons per year
Total Solid Waste			**227.65 tons per year**
Annual Landfill Disposal with AB 341 (75% Reduction)			**56.9 tons per year**
Weekly Landfill Disposal with AB 341 (75% Reduction)			**1.1 tons per week**

Source: 2022.1 CalEEMod Solid Waste Generation Rates

As described above, Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. Both landfills would be able to accommodate the operational solid waste from future development under the proposed Project. Thus, future development under the proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and the proposed Project would not impair the attainment of solid waste reduction goals. Thus, impacts related to landfill capacity would be less than significant.

Future implementing projects would also be subject to Section 5.408.1 of the 2022 California Green Building Standards Code that requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Furthermore, future implementing projects would be required to comply with all applicable State and local waste diversion requirements, including AB 939, AB 341, AB 1836, AB 827 and SB 1383. Therefore, the proposed Project would comply with all solid waste statute and regulations; and impacts would be less than significant.

5.11.5.6 SOLID WASTE CUMULATIVE IMPACTS

Cumulative projects in the area would increase solid waste generation and decrease the available capacity of the nearby landfills. However, as with the proposed Project, cumulative projects have been or would be required to conduct an environmental review and would be required to adhere to solid waste regulations, which are aimed at reducing overall solid waste levels. Furthermore, both the Frank R. Bowerman landfill and the Olinda Alpha Landfill are forecasted to have sufficient capacity to serve current and future needs until their scheduled closures in December 2053 and December 2036, respectively. Therefore, the increase in solid waste from future buildout of the proposed Project would be less than cumulatively considerable and would be less than significant.

5.11.5.7 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

The following standard regulations would reduce potential impacts related to solid waste:

- California Green Building Standards Code
- Assembly Bill 939 (Chapter 1095, Statutes of 1989)
- Assembly Bill 341 (Chapter 476, Statutes of 2011)
- Assembly Bill 1826 (Chapter 727, Statutes of 2014)
- Assembly Bill 827
- Senate Bill 1383 (Chapter 395, Statutes of 2016)
- Tustin City Code Article 4, Chapter 3, Part 1

5.11.5.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts UT-6 and UT-7 would be less than significant.

5.11.5.9 SOLID WASTE MITIGATION MEASURES

No new mitigation measures are required for the proposed Project.

5.11.5.10 SOLID WASTE LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to solid waste would occur.

5.11.6 DRY UTILITIES

5.11.6.1 DRY UTILITIES REGULATORY SETTING

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CalGreen) is updated every three years. The most recent update is the 2022 California Green Building Code Standards that became effective January 1, 2023. The 2022 CALGreen standards that are applicable to the proposed Project include, but are not limited to, the following:

- Electric vehicle charging stations. Facilitate the future installation of electric vehicle supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Title 24 Part 6 Table 5.106.8.
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads).
- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent.

City of Tustin General Plan

The City's General Plan Land Use Element contains the following policy related to dry utilities.

Goal 8: Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.

Policy 8.6: Encourage planned improvements to electricity, natural gas, and communication service systems.

5.11.6.2 DRY UTILITIES ENVIRONMENTAL SETTING

Electricity

Electricity is provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons within its 50,000 square mile service area. According to SCE's 2022 Power Content Label Mix, SCE derives electricity from varied energy resources including: biomass and biowaste, geothermal, hydroelectric, solar, wind, nuclear, and natural gas. SCE also purchases power from independent power producers and utilities, which includes out-of-state providers (California Energy Commission, 2022).

Natural Gas

Natural gas would be provided to the Project by the Southern California Gas Company (SoCal Gas). SoCalGas provides natural gas to more than 21 million persons within its 24,000 square mile service area (SoCalGas, 2024).

Telecommunications

Telecommunications would be provided to the Project by AT&T and Cox Communications.

5.11.6.3 DRY UTILITIES THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-8 Require or result in the relocation or construction of a new or expanded electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects.

5.11.6.4 DRY UTILITIES METHODOLOGY

The evaluation of dry utilities identifies if dry utility demand from the Project would be accommodated via existing dry utility infrastructure available to the Project. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

5.11.6.5 DRY UTILITIES ENVIRONMENTAL IMPACTS

IMPACT UT-8: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF A NEW OR EXPANDED ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact. The proposed Project is a Housing Overlay (HO) district at the Enderle Center site. The HO district will allow residential uses on the Project site, which currently only allows commercial uses. The proposal is regulatory in nature, and a specific development project is not proposed at this time. However, implementation of the proposed Project could result in 413 dwelling units and up to 118,474 SF of nonresidential uses. Implementation of the future buildout would generate demand for electricity, natural gas, communication systems, street lighting, and maintenance of public facilities.

Electricity would be provided to the Project by SCE. Adequate commercial electricity supplies are presently available to meet the incremental increase in demand attributed to the Project. Provision of electricity to the Project site is not anticipated to require or result in the construction of new facilities or the expansion of existing facilities, the construction or relocation of which would cause significant environmental impacts to electricity. Impacts would be less than significant.

Natural gas service would be provided by SoCal Gas. Adequate commercial gas supplies are presently available to meet the incremental increase in demand attributed to the Project. The proposed Project would not require or result in the construction, expansion, or relocation of natural gas facilities that could result in a significant environmental impact. Impacts related to natural gas would be less than significant.

Communication systems for the Project would be provided by AT&T and Cox Communications. AT&T and Cox Communications are private companies that provide connection to the communication system on an as needed basis. As such, the proposed Project is not anticipated to require or result in the construction of new communications facilities or the expansion of existing facilities. Impacts would be less than significant.

Future Project Applicants would be responsible for coordinating with each utility company to ensure utility improvements occur according to standard construction and operation procedures administered by the California Public Utilities Commission. Any development in the City would be required to comply with energy efficiency standards in Title 24 of the California Administrative Code, appliance efficiency regulations in Title 20 of the California Administrative Code, CALGreen. Therefore, potential impacts associated with utilities, including electricity, natural gas and communication systems would be less than significant and no mitigation is required.

5.11.6.6 DRY UTILITIES CUMULATIVE IMPACTS

The geographic scope of cumulative analysis for dry utilities is the service area for the SCE, SoCalGas, AT&T and Cox Communications, which serve the Project area. Cumulative impacts related to the provision of facilities for electricity, natural gas and communications systems have been evaluated throughout this EIR. Mitigation measures have been recommended in cases where cumulatively-considerable impacts associated with utilities infrastructure were identified. Therefore, cumulatively-considerable impacts associated with the provision of utility facilities to serve the Project would be less than significant.

5.11.6.7 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

The following standard regulations would reduce potential impacts related to dry utilities:

- California Code of Regulations Title 24, Part 11; the California Green Building Code

5.11.6.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts UT-8 would be less than significant.

5.11.6.9 DRY UTILITIES MITIGATION MEASURES

No new mitigation measures are required for the proposed Project.

5.11.6.10 DRY UTILITIES LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to dry utilities would occur.

5.11.7 REFERENCES

Arcadis U.S., Inc. . (2020). *Tustin 2020 Urban Water Management Plan .*

Arcadis U.S., Inc. (2020). *East Orange County Water District 2020 Urban Water Management Plan.*

California Energy Commission. (2022). *2022 Power Content Label Southern California Edison.* Retrieved from California Energy Commission: https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure-program/power-content-label

CalRecycle. (2024). *SWIS Facility/Site Summary Frank R. Bowerman Landfill (30-AB-0360)*. Retrieved from CalRecycle: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/2103

CalRecycle. (2024). *SWIS Facility/Site Summary Olinda Alpha Landfill (30-AB-0035)*. Retrieved from CalRecycle: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/2093

Federal Emergency Management Agency. (2009, December 3). *Map Number 06059C0164J*. Retrieved from Federal Insurance Rate Map: https://msc.fema.gov/portal/search?AddressQuery=enderle%20center%2C%20tustin%2C%20ca

SoCalGas. (2024). *Company Profile*. Retrieved from SoCalGas: https://www.socalgas.com/about-us/company-profile

6. Other CEQA Considerations

6.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

State CEQA Guidelines Section 15126.2(c) requires an EIR to describe "any significant impacts, including those which can be mitigated but not reduced to a level of insignificance." As described in detail in Section 5.0 of this Draft EIR, implementation of the Project would result in environmental impacts that cannot be reduced to a level below significance after implementation of Project design features; regulatory requirements; plans, programs, policies; and feasible mitigation measures. The significant impacts that cannot be mitigated to a level below significance are summarized below.

6.1.1 Air Quality

Impact AQ-3, Expose sensitive receptors to substantial pollutant concentrations (Project-level and Cumulative).

The Project would not result in an exceedance of the SCAQMD LSTs during project construction. However, net new emissions associated with the future development of the proposed Project would exceed the SCAQMD LSTs for PM_{10} during operational activities. The majority of the PM_{10} emissions are associated with mobile sources from project-related vehicle trips. Emissions of motor vehicles are controlled by State and federal standards, and the project has no control over these standards. Furthermore, details of future projects developed under the Housing Overlay (HO) district are not known at this time, therefore the analysis considered the most conservative approach. Although future development details are unknown, implementation of Mitigation Measure AQ-1 would require a project-specific assessment of potential localized impacts for future projects and if future projects exceed the applicable LST thresholds, a dispersion modeling analysis would be necessary to calculate health risk from future project implementation. While Mitigation Measure AQ-1 would serve to reduce localized emissions associated with buildout of the project, localized emission impacts would remain significant and unavoidable.

6.1.2 Greenhouse Gas Emissions

Impact GHG-1, Greenhouse Gas Emissions (Project-level and Cumulative). Construction and operation of the Project would generate a net total of approximately 12,804 $MTCO_2e$ per year, thereby exceeding the screening threshold of 3,000 $MTCO_2e$ per year. The total service population (residents plus employees) would be 1,554 persons. The proposed project would result in per service population emissions of 8.2 metric tons of CO_2 per year per service population (MT CO_2e/yr/SP), which would exceed the SCAQMD's plan-level screening threshold of 4.1 MT CO_2e/yr/SP. The proposed Project would implement Mitigation Measure GHG-1 to minimize impacts to the greatest extent feasible. However, there is no way to quantify the reductions from implementation of Mitigation Measure GHG-1 in CalEEMod. The likely scale and extent of build out associated with future projects is unknown; however, the analysis assumes the most conservative estimate would likely exceed the SCAQMD thresholds. While Mitigation Measure GHG-1 would serve to reduce GHG emissions associated with buildout of the Project, GHG emission impacts would remain significant and unavoidable because compliance with future efficiency targets cannot be assured and not enough information is known regarding future projects to recommend further mitigation. As identified above, before development can occur, once a specific development project is proposed it would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. Notwithstanding, GHG emissions are conservatively assumed to be significant and unavoidable on a project-level and cumulative basis.

Impact GHG-2, Conflict with Plan, Policy, or Regulation for Reducing Greenhouse Gas Emissions (Project-level and Cumulative). Although the proposed Project would be consistent with the identified measures and goals from the CARB 2022 Scoping Plan and SCAG's 2024–2050 RTP/SCS (Connect SoCal), the proposed Project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed Project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs and impacts would be significant and unavoidable.

6.2 GROWTH INDUCEMENT

State CEQA Guidelines Section 15126.2(e), Growth Inducing Impact of the Proposed Project, requires that an EIR "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." The CEQA Guidelines also indicate that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. In general terms, a project may foster spatial, economic, or population growth in a geographic area, if it meets any one of the following criteria:

1. Directly or indirectly foster economic or population growth, or the construction of additional housing, in the surrounding environment;
2. Remove obstacles to population growth;
3. Require the construction of new or expanded facilities that could cause significant environmental effects; or
4. Encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

1. Does the Project directly or indirectly foster economic or population growth or the construction of additional housing?

Growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population in excess of what is assumed in master plans, land use plans, or in projections made by regional planning agencies.

As described in Section 5.6, *Population and Housing*, the Project site is approximately 11.80 acres and is currently developed with 87,136 SF of commercial business, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and surface parking lots. The proposed Project is a housing overlay within the Enderle Center site. No development is proposed as part of this Project. The Project site does not currently support residential uses. However, the development that could occur from future buildout of the proposed housing zone is 413 dwelling units and 118,474 SF of nonresidential buildout. As detailed in Section 5.10, *Population and Housing*, the City has an average of approximately 2.88 persons per household (California Department of Finance, 2023). Using this estimate, buildout of the proposed 413 units could result in an additional 1,189 residents in the city, which would be approximately 11.3 percent of the projected population growth in the City of Tustin. Additionally, buildout of the proposed 413 units could result in 10 percent of the projected housing stock growth in the City. Thus, while the Project would result in an increase in population and housing units in an area not previously planned for housing, the increase in population and number of housing units that would result from the proposed Project would not exceed projections for the City.

Further, SCAG determined the City needs to provide a total of 6,782 housing units to meet their Regional Housing Needs Allocation (RHNA). Thus, the Project would contribute to the City's fair share of housing and, in part, satisfy the State requirements to provide new housing opportunities to increase housing supply. Additionally, the proposed Project implements goals and policies of the Tustin Housing Element that support a variety of housing types and densities.

As described in Chapter 3, *Project Description*, the Project also anticipates the future nonresidential buildout of the project area would add 118,474 SF of new non-residential development to the existing Enderle Center. As described in Section 5.6, *Population and Housing*, an additional 118,474 SF of nonresidential space would result in approximately 365 new employees (1 employee per 325 SF). Therefore, buildout of the nonresidential portion of the Project would represent approximately 1.69 percent of the projected employment growth in the City. Thus, while the Project would result in an increase in employment, the increase in the number of jobs that would result from the proposed Project would not exceed projections for the City.

As described in Section 5.6, *Population and Housing*, the City of Tustin is jobs-rich, meaning the addition of residential units in the area would not require additional jobs that could result in growth. Conversely, the new residents would fill the need for employees that are anticipated by SCAG projections. Thus, the additional residential units would not indirectly result in the need for additional employment opportunities, which could result in growth. Therefore, this indirect impact related to growth would be less than significant. Thus, impacts related to increased growth through the provision of employment opportunities would be less than significant.

Overall, the Project site has historically provided employment opportunities and economic activity. The proposed Project would provide for a different variety of employment opportunities and economic activities that are consistent with development occurring and planned for in the Project vicinity. As detailed in Section 5.6, *Population and Housing*, the proposed Project would reduce (improve) the jobs-housing ratio slightly by adding 413 residential units. The proposed Project would provide a regional beneficial effect of providing the opportunity for housing on the Project site in a jobs-rich area, where employees can easily travel to nearby employment opportunities. In addition, the future 413 residential units would not exceed the SCAG population, housing, and employment growth projections for the City and would represent a nominal percentage of SCAG's overall projections for the City of Tustin. Thus, the proposed Project provides housing and would not result in the need for additional housing. Therefore, the economic effects of the proposed Project would not result in the need for additional development to support the proposed Project and would not result in a substantial impact on the environment.

2. Does the Project remove obstacles to population growth?

The elimination of a physical obstacle to growth is considered to be a growth inducing impact. A physical obstacle to growth typically involves the lack of public service infrastructure. The Project would induce growth if it would provide public services or infrastructure with excess capacity, which would serve lands that would otherwise not be developable.

Remove obstacles to growth through changes in utility infrastructure. As described in Section 3.0, *Project Description*, roadways, and utilities may be required to support development of future residential construction within the Project site. Future onsite infrastructure improvements that may be necessary for residential development within the Enderle Center include storm drains, wastewater, water, and dry utilities that would connect to existing facilities within the Project site or adjacent to the Project area. Specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed. However, the Enderle Center is surrounded by urban built-up land that is currently connected to the City's existing infrastructure system and that is serving the Project site. Future development allowed under the proposed Project would connect to existing infrastructure and would be sized appropriately to accommodate only the future development of the Enderle Center, as ensured and verified by the City during the plan check and permitting process, prior

to obtaining building permits. Additionally, future developers would need to conduct capacity analyses of sewer and water utilities in the area, to ensure conveyance and pressure is adequate for future projects proposed on a project-by-project basis. The developer will be responsible for preparing capacity analysis and submitting them to the East Orange County Water District (EOCWD) and the City. The capacity analysis and infrastructure improvements shall be reviewed and approved by EOCWD and the City prior to approval of the construction permit, consistent with Mitigation Measure UT-1 in Section 5.11, *Utilities*.

Overall, future development allowed under the proposed Project could redevelop the existing onsite infrastructure systems and replace multiple utility lines. However, the new infrastructure would not provide additional capacity beyond what is needed to serve future development or what was previously planned for by the City. Because the anticipated infrastructure improvements would only enhance services to proposed developments and not provide an extension of service to areas that are currently not served, or provide excess capacity, Project infrastructure improvements would not result in significant growth inducing impacts.

Furthermore, future development allowed under the proposed Project could also implement circulation improvements, which are unknown at this time, such as pedestrian and bicycle facilities, which would enhance local circulation and use of transit. However, future circulation improvements would not extend circulation into a new area or provide excess circulation capacity that could induce growth. As a result, the circulation improvements would result in less than significant growth inducing impacts.

Remove obstacles to growth through changes in existing regulations pertaining to land development. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). A project could directly induce growth if it would remove barriers to population growth such as changes to a jurisdiction's general plan and zoning code, which allows new development to occur in underutilized areas. The proposed Project would include a GPA to establish that higher density residential uses are allowed in the Planned Community Commercial Business (PCCB) land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). The Project also includes an amendment to Tustin City Code, Article 9 (Land Use), Chapter 2 (Zoning), Part 5, to establish a HO district, which allows for high density residential development, and stipulates that objective design standards for residential development will apply to properties within the boundary of the HO district.

The proposed Project is redevelopment of an already developed area that is surrounded by urban development. The proposed Project would involve implementation of a HO district, which would allow residential development of 413 dwelling units over a maximum area of seven acres and would allow for future onsite residents and additional onsite employees. However, the zoning and land use changes are parcel-specific and would not result in growth outside of the Project site, because the areas are either completely developed or within development land use plans. The addition of a HO district to the Project site's zoning designation would not result in removing an obstacle to growth within the Project vicinity.

In addition, SCAG policies concerning regional growth-inducement are included as part of Section 5.4, *Land Use and Planning*, and Section 5.6, *Population and Housing*. As described in those sections, the growth anticipated by SCAG's projections are consistent with the estimated future buildout of the proposed 413 units (1,189 residents) and an additional 118,474 SF of new nonresidential space (365 new employees). Therefore, impacts related to growth from changes to existing regulations pertaining to land development would be less than significant.

3. Does the proposed Project require the construction of new or expanded facilities that could cause significant environmental effects?

Growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services that requires the construction of new public service facilities, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The proposed Project is expected to incrementally increase the demand for fire protection and emergency response, police protection, school services, and recreational facilities and would not increase demand beyond that assumed for buildout of the City of Tustin. As described in Section 5.11, *Public Services*, the proposed Project would not require development of additional facilities or expansion of existing facilities to maintain existing levels of service. Based on service ratios and build out projections, the proposed Project would not create a demand for services beyond the capacity of existing facilities. Therefore, an indirect growth inducing impact as a result of expanded or new public facilities that could support other development in addition to the proposed Project would not occur. The proposed Project would not have significant growth inducing consequences that would require the need to expand public services to maintain desired levels of service.

4. Does the Project encourage or facilitate other activities that could significantly affect the environment, either individually or cumulatively?

The proposed Project includes a GPA to amend the City's existing General Plan to establish that higher density residential uses are allowed in the Planned Community Commercial Business (PCCB) land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). In addition, the Project also includes an amendment to the City's Zoning Map. The proposed zone change would require an amendment to Tustin City Code, Article 9 (Land Use), Chapter 2 (Zoning), Part 5, to establish a HO district that allows for higher density residential development, and stipulates that objective design standards will apply to properties within the boundary of the HO district. The proposed Project would comply with all applicable City plans, policies, and ordinances. In addition, Project features and mitigation measures have been identified within this EIR to ensure that the proposed Project minimizes environmental impacts. The proposed Project would not involve any precedent-setting action that could encourage and facilitate other activities that significantly affect the environment.

6.3 SIGNIFICANT IRREVERSIBLE EFFECTS

State CEQA Guidelines require the EIR to consider whether "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely…. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified." (CEQA Guidelines Section 15126.2(d)). "Nonrenewable resource" refers to the physical features of the natural environment, such as land, waterways, mineral resources, etc. These irreversible environmental changes may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed irretrievable commitments of nonrenewable resources are not justified (e.g., the project involves the wasteful use of energy).

The Project would result in or contribute to the following irreversible environmental changes:

- Lands in the Project site that are currently developed with commercial retail uses or parking area would be committed to residential and/or commercial uses once the housing overlay is implemented. Secondary effects associated with this irreversible commitment of land resources include:
  - o Increased vehicle trips on surrounding roadways during operation of future projects under the proposed Project (see Section 5.9, *Transportation*).
  - o Emissions of air pollutants associated with construction and operation of future projects under the proposed Project (see Section 5.1, *Air Quality*).
  - o Consumption of non-renewable energy associated with construction and operation of future projects under the proposed Project due to the use of automobiles, lighting, heating and cooling systems, appliances, and the like (see Section 5.3, *Energy*).
  - o Increased ambient noise associated with an increase in activities and traffic from future projects under the proposed Project (see Section 5.9, *Noise*).
- Construction of future projects under the proposed Project as described in Section 3.0, *Project Description*, would require the use of energy produced from non-renewable resources and construction materials.

In regard to energy usage from development of future projects under the proposed Project, as demonstrated in the analyses contained in Section 5.3, *Energy*, the proposed Project would not involve wasteful or unjustifiable use of non-renewable resources, and conservation efforts would be enforced during construction and operation of future proposed development, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Development of future projects under the proposed housing overlay would incorporate energy-generating and conserving project design features, including those required by the California Building Code, California Energy Code Title 24, which specify green building standards for new developments. Project-specific information related to energy consumption is provided in Section 5.3, *Energy*, of this EIR.

6.4 REFERENCES

California Department of Finance. (2023, May). E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2023. Retrieved from State of California Department of Finance.

City of Tustin. (2022). Housing Update 2021-2019.

The Natelson Company, Inc. (2001). Employment Density Study Summary Report.

7. Effects Found Not Significant

CEQA Guidelines Section 15126.2(a) states that "[a]n EIR shall identify and focus on the significant effects on the environment." During the preparation of this EIR, the Project was determined in an Initial Study (included in Appendix A of this Draft EIR) to have no potential to result in significant impacts under twelve environmental issue areas as described below. Therefore, these issue areas were not required to be analyzed in detail in EIR Section 5, *Environmental Impact Analysis*.

CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. As allowed by CEQA Guidelines Section 15128, statements related to the above listed topic areas are presented below.

7.1 AESTHETICS

Scenic Vista

Future residential development would be constructed within the boundaries of the existing Enderle Center site and would not impede any existing views of Peters Canyon Ridgeline from 17th Street. The provision for residential development in an area formerly designated for nonresidential land uses would not further diminish views of a scenic vista. Therefore, the Project would result in no impact.

Scenic Highway

According to the California Department of Transportation (Caltrans) Scenic Highway Map, the City of Tustin does not contain any scenic highways within or surrounding the City (California Department of Transportation, 2018). The nearest State scenic highway is Route 91 in the City of Orange, approximately 8.5 miles to the north. According to the County of Orange General Plan, there are no designated scenic roadways or scenic vistas in the Project vicinity (County of Orange, 2005). Therefore, the Project would have no impact on scenic resources within a State scenic highway.

Conflict with Regulations Governing Scenic Quality

The Project site is currently developed as a commercial shopping center and is surrounded by other commercial development. The Project site is bordered to the north by 17th Street, followed by commercial, residential and office uses; to the east by Enderle Center Drive, followed by office uses; to the south by South Vandenberg Lane, followed by residential uses; and to the west by Tustin city limits and SR-55 freeway, followed by restaurants and office uses in the City of Santa Ana. The Project would include a General Plan Amendment (GPA), Zoning Code Amendment (CA), and Zone Change (ZC) of the Project site to apply a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element.

Per Housing Element Program 1.2a, the City will adopt Objective Design Standards (ODS) to ensure high quality residential development, while simultaneously meeting the City's goal of streamlining residential development to meet its Regional Housing Needs Allocation (RHNA) goals. Development is not proposed as part of the Project; however, all future residential development proposed within the Project site would be subject to the requirement and provisions of the applicable ODS.

The ODS would ensure high visual character and quality of future residential development proposed within the Project site. All future residential development would be required to comply with the City's ODS for the

site. Therefore, the Project would not conflict with applicable zoning and other regulations governing scenic quality and would have a less than significant impact on visual character and quality.

Light and Glare

The Project does not propose development but would allow for the future development of residential land uses within an existing commercial shopping center. Future development could add additional nighttime light sources, such as landscape lighting, security lighting, and the lighting from additional cars. As previously discussed, all future projects would be required to comply with the applicable ODS for the site. The ODS would include specific setbacks, lighting standards, and building materials that would ensure the avoidance of potential lighting impacts. Further, all future projects would be required to comply with the City's light and glare ordinance, which would be verified through plan check prior to project approval. Therefore, the Project would result in a less-than-significant impact.

7.2 AGRICULTURE AND FOREST RESOURCES

Farmland

Per the California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program (FMMP) Map, the Project site is designated as Urban and Built-Up Land (California Department of Conservation, 2018). Further, the City does not currently include any commercial agricultural land uses. Existing zoning categories within the City of Tustin do not allow for commercial agricultural uses. Therefore, the Project would result in no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Williamson Act Contract

The Project site is currently developed with commercial land uses and does not include agricultural land uses. The Project site is not currently under a Williamson Act contract. Therefore, the Project would result in no impact on existing zoning for agricultural use or a Williamson Act contract.

Forest Land/Timberland

The Project site is currently completely developed with commercial land use. The Project site does not include forest land or timberland. Additionally, the Project site is currently zoned for Planned Community Commercial (PC COM), which does not provide for forest land or timberland production and management. Therefore, the Project would result in no impact on zoning of forest land or timberland or on the conversion of farmland and timberland to non-agricultural or non-forest uses.

7.3 BIOLOGICAL RESOURCES

Special Status Species

The Project site consists of approximately 11.8 acres that are developed with existing commercial uses, including restaurant, retail, and office establishments, a paved parking lot, and landscaping. The area identified in the City's adopted Housing Element as most likely for future residential development is seven acres of existing parking lot area of the Project site. The Project site is surrounded by urban development with structures, paved parking, and ornamental landscaping. There is no evidence of either suitable habitat for or the presence of any endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS).

The Project does not propose development; however, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element. Future landscaping implemented as part of future projects would likely include a variety of ornamental trees, shrubs, and groundcover. As the Project site is currently completely paved, implementation of the Project would not result in an adverse effect, either directly or through habitat modifications, on any sensitive species, and impacts would not occur.

Riparian Habitat and Sensitive Natural Communities

There is no existing riparian habitat or sensitive natural community within the developable area of the site. Therefore, the Project would result in no impact.

Wetlands

There are no wetlands or riparian areas within the developable area of the site. Therefore, the Project would result in no impact.

Wildlife Movement Corridor and Wildlife Nursery Sites

The Project site does not support conditions for migratory wildlife corridors or linkages. The Project site is completely developed and surrounded by a roadway and developed land uses. The site and surrounding areas do not provide function for wildlife land movement. Additionally, the surrounding area is developed and urban. There are no rivers, creeks, or open drainages near the site that could function as a wildlife corridor. Thus, implementation of the Project would not result in impacts related to wildlife movement or wildlife corridors.

However, the Project site contains existing ornamental trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibit disturbing or destroying active nests. Therefore, Mitigation Measure BIO-1 has been included to require that if commencement of vegetation clearing for any future residential development project occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. With implementation of Mitigation Measure BIO-1, potential impacts to nesting birds would be less than significant.

Biological Resource Policies

The Project site is urban and developed and contains no biological resources to be preserved under the resource protection policies of the City's General Plan. Article 7, Chapter 3 of the Municipal Code addresses the protection of "trees, plants or shrubs in or growing upon or over any public parkway street, highway, alley, right-of-way, City-owned property in the City." The Project would not impact any such trees and shrubs. To the extent that future development facilitated by the Project is required to plant new trees on public property pursuant to Section 7308 of Article 7, Chapter 3, the Project would be required to comply with the Municipal Code requirements as part of the City permitting process (PPP BIO-1). As a result, impacts would be less than significant.

Adopted Habitat Conservation Plan

The Project site does not contain any natural lands that are subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, the Project would not result in impacts to biological habitat or conservation plans.

PPP BIO-1 **Street Trees.** Installation of street trees shall occur in compliance with the City of Tustin Municipal Code Article 7, Chapter 3, Section 7308.

MM BIO-1 **Migratory Bird Treaty Act.** Prior to commencement of grading activities, the City Building Division shall verify that, in the event that vegetation and tree removal activities occur within the active breeding season for birds (February 1–September 15), the Project applicant (or their Construction Contractor) shall retain a qualified biologist (meaning a professional biologist that is familiar with local birds and their nesting behaviors) to conduct a nesting bird survey no more than 3 days prior to commencement of construction activities.

The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by Project-related construction activities, such as noise, human activity, and dust, etc. If active nesting of birds is observed within 100 feet of the designated construction area prior to construction, the qualified biologist shall establish an appropriate buffer around the active nests (e.g., as much as 500 feet for raptors and 300 feet for non-raptors [subject to the recommendations of the qualified biologist]), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

7.4 CULTURAL RESOURCES

Historical Resources

According to the results of the Cultural Records Search prepared by Brian F. Smith and Associates Environmental Services (BFSA) for the Project, the Project site does not contain any historical resources. Additionally, the area proposed for future implementation of residential land uses pursuant to the Housing Element is the existing parking lot, which does not contain any structures that could become historical in the future. Therefore, the Project would result in no impact on a historical resource.

Archaeological Resources

According to results of the cultural record search prepared for the Project, the Project site does not contain any archaeological resources. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. Therefore, the Project site is heavily disturbed and does not currently contain any native undisturbed soils. However, the Project could facilitate future construction at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. Therefore, there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. In the event of an inadvertent discovery of a buried archeological resource, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource", and if the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist.

The City has detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP

HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential archaeological resources in the unlikely event that a resource is encountered. Therefore, the Project would result in a less than significant impact with mitigation on archeological resources.

Human Remains

The Project site has been previously disturbed, as described above, and has not been previously used as a cemetery. Thus, human remains are not anticipated to be uncovered during project construction. In addition, California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 (included as PPP CUL-1) mandate the process to be followed in the event of an accidental discovery of any human remains. Specifically, California Health and Safety Code Section 7050.5 requires that if human remains are discovered, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of death, and made recommendations concerning the treatment and disposition of the human remains to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with existing law would ensure that significant impacts to human remains would not occur through the implementation of future construction facilitated by the Project.

PPP CUL-1 **Human Remains.** In the event that human remains are encountered on the Project site, work within 50 feet of the discovery shall cease and the County Coroner shall be notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.l). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. Prior to the issuance of grading permits, the City Community Department Director, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

MM CUL-1 **Inadvertent Discovery.** In the event that potential archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource," as defined in Section 21083.2(g) of the California Public Resources Code. Any resources identified shall be treated in accordance with California Public Resources Code Section 21083.2(g).

If the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. The discovery would also be reported to the City and the South Central Coastal Information Center (SCCIC).

Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall

ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist as specified above.

7.5 GEOLOGY AND SOILS

Fault Rupture

According to the California Geological Survey available fault maps, the Project is approximately 10 miles to the south of the nearest A-P fault, Whitter Fault (Parrish, Earthquake Zones of Required Investigation, Yorba Linda Quadrangle, 2015). The Project is also approximately 11 miles to the north of the North Branch Fault (Parrish, Earthquake Zones of Required Investigation, Seal Beach Quadrangle, 1999). Due to the location of these faults, the general region is subject to the potential for earthquakes; however, the Project site is outside of a 500-foot radius from an active fault and is not subject to a special development permit. The Project site contains existing development, and the provision for additional development would not exacerbate existing risk of earthquake. Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Therefore, the Project would result in a less-than-significant impact.

Ground Shaking

Due to the Project's location within a seismically active region of Southern California, moderate to strong ground shaking can be expected at the Project site. However, as described above, structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) which provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Implementation of CBC standards would be verified by the City during the plan check and permitting process (PPP GEO-1). Therefore, because the proposed Project would be constructed in compliance with the CBC, the proposed Project would result in a less-than-significant impact related to strong seismic ground shaking.

Liquefaction

According to the California Geological Survey available fault maps, the Project is approximately 1.25 miles from the nearest liquefaction zone in the City of Orange (Parrish, Earthquake Zones of Required Investigation, Orange Quadrangle, 1998). The southern portion of Tustin is also identified as partially within a liquefaction zone. Additionally, all future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). The Project site is outside of a liquefaction zone and would be required to conduct project-specific geotechnical investigations at the time that the project is proposed; therefore, the Project would result in a less-than-significant impact with mitigation.

Landslides

The Project site is currently fully developed with commercial and office uses. The Project site is flat and is not adjacent to or within the vicinity of steep slopes or other landforms susceptible to landslides. No development is proposed as part of this Project. The provision of future residential development would not result in new risk of loss, injury, or death involving a landslide. Therefore, the Project would result in no impact.

Soil Erosion

All proposed future development would be required to comply with the California Regional Water Quality Control Board (RWQCB) Order No. R8-2010-0033, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618033 – Construction General Permit requirements (PPP HYD-1). Requirements include installation of Best Management Practices (BMPs), which establishes minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by the RWQCB regulations to be developed by a QSD (Qualified SWPPP Developer). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures (PPP HYD-2). The City of Tustin Grading Manual is a compilation of rules, procedures, and interpretations necessary to carry out the provisions of the Tustin City Code relating to grading and excavation.

Following construction, future development would be required to prepare and implement a Water Quality Management Plan (WQMP) per City standards. Future projects would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District (OCFCD) and the incorporated cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP requires that new development and significant redevelopment projects develop and implement a water quality management plan (WQMP) that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. These requirements would ensure that future projects would not result in substantial soil erosion or the loss of topsoil. With implementation of uniformly applicable requirements (SWPPP, City of Tustin Grading Manual, and the DAMP), the Project would result in a less-than-significant impact.

On- or Offsite Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse

As described above, the Project site is located in a relatively flat, developed, urban area that does not contain or adjacent to large slopes, and the Project would not generate large slopes. Therefore, impacts related to landslides would not occur.

As discussed above, the Project site is outside of a zone identified as susceptible to liquefaction. Further, the Project site then has a low potential for lateral spreading. However, all future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation as specified in MM GEO-1.

According to the U.S. Geological Survey (USGS) Areas of Subsidence in California Map, the Project site is within an area of subsidence as a result of excessive groundwater pumping (United States Geological Survey, 2023). As such, all future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project as specified in MM GEO-1.

Therefore, the Project would result in a less-than-significant impact with mitigation related to the risk of landslide, lateral spreading, subsidence, liquefaction, or collapse.

Expansive Soils

No development is proposed as part of this Project. All future projects would be required to comply with applicable federal, State, and local policies and regulations established to prevent or reduce impacts due to expansive soil, including Policy 8.5 of the Conservation/Open Space/Recreation Element of the City's General Plan, which requires City review of threats from expansive soils during the development review process (PPP GEO-2). Further, if necessary, geological investigations would be prepared and implemented for each future project to reduce significant impacts (MM GEO-1). Therefore, the project would result in a less-than-significant impact with mitigation.

Alternative Waste Disposal Systems

All future development would be served by the City sewer utilities and would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, the Project would result in no impact related to alternative waste disposal systems.

Paleontological Resources

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. Therefore, the Project site is heavily disturbed and does not contain any native undisturbed soils. However, the Project could facilitate future construction at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. According to the City's Conservation/Open Space/Recreation Element, the Project site is not located in an area identified by the General Plan as "High Paleontological Sensitivity." (City of Tustin, 2018). Further, the City has detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources (PPP HYD-2). Proper grading, soil management, and open space standards would work to preserve any potential paleontological resources in the unlikely event that a resource is encountered. Therefore, the Project would result in a less-than-significant impact on a paleontological resource, site, or geologic feature.

Plans, Policies, and Programs

PPP GEO-1 **CBC Title 24, Part 2.** Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process.

PPP GEO-2 **Policy 8.5 of the Conservation/Open Space/Recreation Element.** Project applicants would be required to submit applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas, which would be reviewed by the City during plan check.

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design, Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project to minimize the adverse effects on receiving waters.

Mitigation Measures (MM)

MM GEO-1 All future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation.

7.6 HAZARDS AND HAZARDOUS MATERIALS

Routine Transport, Use, or Disposal of Hazardous Materials

Construction: Future construction activities could involve the transport, use, and disposal of hazardous materials such as paints, solvents, oils, grease, and caulking. In addition, hazardous materials could be needed for fueling and servicing construction equipment on the site. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and State requirements that are implemented by the City during building permitting for construction activities. These regulations include: the federal Occupational Safety and Health Act and Hazardous Materials Transportation Act; Title 8 of the California Code of Regulations (CalOSHA), and the State Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. As a result, routine transport and use of hazardous materials during construction would be consistent with applicable regulations and would be less than significant.

Operation: The Project involves the provision for future development of up to 413 housing units, which involve routinely using household hazardous materials including solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the Project. Additionally, the Project would create a mixed-use environment in which residential land uses would be introduced into existing commercial land use (the Enderle Center). Existing commercial uses include a mix of office, restaurant, and retail establishments. Existing commercial uses require the routine use of similar hazardous materials as residential land uses (solvents, cleaning agents, paints, pesticides, batteries,

fertilizers, and aerosol cans) and would not impose additional hazards to potential future residential uses. Therefore, operation of the Project would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste, and impacts would be less than significant.

Release of Hazardous Materials into the Environment

Construction: To avoid an impact related to an accidental release, the use of BMPs during construction are implemented as part of a SWPPP as required by the National Pollution Discharge Elimination System General Construction Permit (and included as PPP HYD-1). All future development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element would be required to develop and implement a SWPPP as required through NPDES. Therefore, construction of future development would result in a less-than-significant impact.

Operation: As described previously, future operation of up to 413 residential units would include use of limited hazardous materials, such as solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. Normal routine use of typical residential products pursuant to existing regulations would not result in a significant hazard to the environment, residents, or workers in the vicinity of the Project. As a result, operation of the proposed Project would not create a reasonably foreseeable upset and accident condition involving the release of hazardous materials into the environment, and impacts would be less than significant.

Hazardous Substances Within One-Quarter Mile of a School

The Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive, and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by the 55 freeway, including properties west of Yorba Street. The nearest school, Loma Vista Elementary School, is located approximately 2,100 feet to the east of the Project site. However, as described previously, construction and operation of the Project could involve the use, storage, and disposal of small amounts of hazardous materials on the Project site. These hazardous materials would be limited and used and disposed of in compliance with federal, State, and local regulations, which would reduce the potential for accidental release into the environment near a school. Therefore, the Project would not emit hazardous or handle acutely hazardous materials, substances, or waste near a school, and impacts would be less than significant.

Hazardous Materials Sites

The Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Department of Toxic Substances Control, 2023). Therefore, the Project would result in no impact.

Airport Hazards

The nearest airport to the Project site is John Wayne Airport, located over 5.5 miles southwest of the Project site. The Project site is not located within any land use compatibility zone for John Wayne Airport, nor is it within an airport safety zone within the Airport Environs Land Use Plan (AELUP) (Orange County Airport Land Use Commission, 2008). The Project's proximity to the airport would not result in potential safety hazards or excessive noise for people that would reside or work within the Project site in the future. Therefore, the Project would result in no impact.

Emergency Response Plan

The Project does not include proposed development and would not impair the implementation of evacuation protocol in the event of an emergency within the City or Project site. Additionally, each future residential

project implemented as part of the housing overlay and Housing Element would require a project-level plan check with the City and would be reviewed by the City's fire department (Orange County Fire Authority) to ensure proper emergency access to and from the site. Therefore, the Project would result in a less-than-significant impact.

Wildfire Hazards

According to the CAL FIRE Fire Hazard Severity Zone Map, the Project site is not located within or near State responsibility areas or lands classified as very high fire hazard severity zones (California Department of Forestry and Fire Protection, 2023). Therefore, the Project would result in no impact regarding the exposure of people or structures to risk of loss, injury, or death involving a wildland fire.

Plans, Policies, and Programs (PPP)

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

7.7 HYDROLOGY AND WATER QUALITY

Water Quality Standards

Construction: Potential water quality impacts during construction would be prevented through implementation of a SWPPP (PPP HYD-1). Construction of the Project would disturb more than one acre of soil; therefore, the proposed Project would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity.

Adherence to the existing requirements and implementation of the appropriate BMPs, as ensured through the City's plan check and permitting process, would ensure that the Project would not violate any water quality standards or waste discharge requirements, potential water quality degradation associated with construction activities would be minimized, and construction impacts would be less than significant.

Operation: Future development facilitated by the Project would include operation of residential uses. Potential pollutants associated with the proposed uses include various chemicals from cleaners, pathogens from pet wastes, nutrients from fertilizer, pesticides and sediment from landscaping, trash and debris, and oil and grease from vehicles. If these pollutants discharge into existing stormwater systems, it could result in further degradation of water quality. However, operation of the proposed Project would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Wast e Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated cities of Orange County within the Santa Ana Region (included as PPP HYD-3). The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Overall, implementation of the WQMP pursuant to the existing

regulations (included as PPP HYD-3) would ensure that operation of the proposed Project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality, and impacts would be less than significant.

Erosion or Siltation On- and Offsite

Construction: Construction of future development could result in a temporary disturbance of soils that could cause erosion or siltation on- and off-site. However, all proposed development construction would be required to comply with the California RWQCB Order No. R8-2010-0033, NPDES Permit No. CAS618033 – Construction General Permit requirements (PPP HYD-1). To reduce the potential for soil erosion and the loss of topsoil, a SWPPP is required by the RWQCB regulations to be developed by a QSD. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures (PPP HYD-2).

Following construction, future development would be required to prepare and implement a WQMP per City standards. Future projects would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District (OCFCD) and the incorporated cities of Orange County within the Santa Ana Region (included as PPP HYD-3). The DAMP requires that new development and significant redevelopment projects develop and implement a water quality management plan (WQMP) that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. These requirements would ensure that future projects would not result in substantial soil erosion or the loss of topsoil. With implementation of uniformly applicable requirements (SWPPP, City of Tustin Grading Manual, and the DAMP), the Project would result in a less-than-significant impact.

Operation

Changes due to development of the Project site could result in potential changes in the drainage pattern due to siltation and erosion. However, the City's Municipal Separate Storm Sewer System (MS4) permit and County DAMP require new development projects to prepare a WQMP (included as PPP HYD-3) that is required to include BMPs to reduce the potential of erosion and/or sedimentation through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for erosion and siltation. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to alteration of a drainage pattern and erosion/siltation from operational activities would be less than significant.

Surface Runoff

Future construction facilitated by the Project would require the demolition of existing pavement and construction of building structures, including foundations, floor slabs, and utilities systems. These activities could temporarily alter the existing drainage pattern of the site and change runoff flow rates. However, as described previously, implementation of the Project requires a SWPPP (included as PPP WQ-1) that would address site specific drainage issues related to construction of the Project and include BMPs to eliminate the potential of flooding or alteration of a drainage pattern during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) as verified by the City through the construction permitting process would prevent construction-related

impacts related to potential alteration of a drainage pattern or flooding on- or offsite from development activities. Therefore, construction impacts would be less than significant.

Stormwater Drainage System

Construction: Construction of future development could result in a temporary disturbance of soils and the use of construction equipment and materials that could increase pollutant loads discharged into stormwater runoff. However, implementation of the Project requires a SWPPP (included as PPP HYD-1) that would address site-specific pollutant and drainage issues related to construction of the Project and include BMPs to eliminate the potential of polluted runoff and increased runoff during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP HYD-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to increases in run-off and pollution from development activities. Therefore, impacts would be less than significant.

Operation: The Project site currently drains into the City's stormwater system via a series of culverts and drains. Stormwater drains to the southeast corner of the site into a catch basin at the Vanderberg Lane and Enderle Center Drive intersection. The storm drain then continues east and connects to the existing Orange County Flood Control District (OCFCD) facility located between Enderle Center Drive and Prospect Avenue. Because the site is currently almost entirely paved, future development would increase intensity of development, but would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff. Therefore, future development would not be anticipated to exceed capacity of the existing stormwater drainage system.

Additionally, as discussed previously, the City's MS4 permit and County DAMP require new development projects to prepare a WQMP (included as PPP HYD-3) that is required to include BMPs to reduce the potential of stormwater pollutants through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for sources of polluted runoff. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to stormwater runoff would be less than significant.

Flood Flows

The Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions. Therefore, the Project would result in a less-than-significant impact.

Flood Hazard, Tsunami, or Seiche Zones

According to the Federal Emergency Management Agency (FEMA) Map 06059C0164J, the Project site is within Flood Zone X, or the 0.2 percent annual change flood area, areas of 1 percent annual chance flood with average depth less than 1 foot or with drainage areas of less than 1 square mile (Federal Emergency Management Agency, 2009). The site is not within a special flood hazard area.

The Project site is not located near an inland body of water that could result in impacts due to seiche. The Pacific Ocean is located over 12 miles southwest of the Project site; consequently, there is no potential for the Project site to be inundated by a tsunami that could release pollutants. In addition, the Project site is flat and not located near any steep hillsides; therefore, there is no potential for the site to be adversely affected by mudflow. Thus, implementation of the proposed Project would not expose people or structures to a

significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow that could release pollutants due to inundation of the Project site. No impact would occur.

Plans, Policies, and Programs (PPP)

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP.** Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design, Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

7.8 LAND USE AND PLANNING

Divide Established Community

The Project site is currently developed as a commercial center that includes restaurant, retail, and office uses. The Project would include a GPA, CA, and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The Project does not propose development; however, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element. Implementation of the Project would allow for the intensification of the existing site; however, the introduction of residential land uses would not result in division of an established community. Therefore, the Project would result in no impact.

7.9 MINERAL RESOURCES

The Project site is not identified for mineral resource extraction per the City's General Plan Conservation Element (City of Tustin, 2018). Therefore, the Project would result in no impact on the loss of availability of a known mineral resource or a locally important mineral resource recovery site.

7.10 POPULATION AND HOUSING

Displacement of People or Housing

The Project would include land use changes to allow for the future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element, within an existing commercial land use.

Therefore, the Project would not result in the displacement of existing people or housing and there would be no impact.

7.11 WILDFIRE

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. According to the CalFire Fire Hazard Severity Zone Map, the City of Tustin contains very high fire severity zones in the northeast portion of the City (California Department of Forestry and Fire Protection, 2023). The Project site is not located within or near State responsibility areas or lands classified as very high fire hazard severity zones. Therefore, the project would result in no impact due to wildfire hazard.

7.12 REFERENCES

California Department of Conservation. (2018, November 1). *DOC Maps: Division of Land Resource Protection*. Retrieved November 6, 2023, from California Important Farmland Finder: https://maps.conservation.ca.gov/DLRP/CIFF/

California Department of Forestry and Fire Protection. (2023, December 19). *CalFire Hazard Severity Zone Viewer*. Retrieved from Fire and Resource Assessment Program: https://egis.fire.ca.gov/FHSZ/

California Department of Transportation. (2018). *California State Scenic Highway System Map*. Retrieved from https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa

California Waterboards. (2023). *California 2018 Integrated Report Map*. Retrieved from California 2018 Integrated Report: https://www.waterboards.ca.govHeader ControllerCalifornia 2018 Integrated Report

City of Tustin. (2018, November). *City of Tustin General Plan*. Retrieved from https://www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF

County of Orange. (2005, April). *County of Orange General Plan*. Retrieved from Chapter IV Scenic Highway Plan Map: https://ocds.ocpublicworks.com/sites/ocpwocds/files/import/data/files/8588.pdf

Department of Toxic Substances Control. (2023, December 22). *Hazardous Waste and Substances Sites List*. Retrieved from Envirostar: https://www.envirostor.dtsc.ca.gov/public/

Federal Emergency Management Agency. (2009, December 3). *Map Number 06059C0161J*. Retrieved from Federal Insurance Rate Map: https://msc.fema.gov/portal

Federal Emergency Management Agency. (2009, December 3). *Map Number 06059C0164J*. Retrieved from Federal Insurance Rate Map: https://msc.fema.gov/portal/search?AddressQuery=enderle%20center%2C%20tustin%2C%20ca

Orange County Airport Land Use Commission. (2008, April 17). *Land Use Plan for John Wayne Airport*. Retrieved from Orange County Airport Land Use Commission: https://files.ocair.com/media/2021-02/JWA_AELUP-April-17-2008.pdf?VersionId=cB0byJjdad9OuY5im7Oaj5aWaT1FS.vD

Parrish, J. G. (1998, April 15). *Earthquake Zones of Required Investigation, Orange Quadrangle*. Retrieved from California Geological Survey: https://maps.conservation.ca.gov/cgs/EQZApp/app/

Parrish, J. G. (1999, March 25). *Earthquake Zones of Required Investigation, Seal Beach Quadrangle*. Retrieved from California Geological Survey: https://maps.conservation.ca.gov/cgs/EQZApp/app/

Parrish, J. G. (2001, January 17). *Earthquake Zones of Required Investigation, Tustin Quadrangle*. Retrieved from California Geological Survey: https://maps.conservation.ca.gov/cgs/EQZApp/app/

Parrish, J. G. (2015, December 4). *Earthquake Zones of Required Investigation, Yorba Linda Quadrangle*. Retrieved from California Geological Survey: https://maps.conservation.ca.gov/cgs/EQZApp/app/

United States Geological Survey. (2023, December 19). *Areas of Land Usbsidence in California*. Retrieved from USGS: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html

8. Alternatives

8.1 INTRODUCTION

The identification and analysis of alternatives to a project is a fundamental part of the environmental review process pursuant to CEQA. Public Resources Code (PRC) Section 21002.1(a) establishes the need to address alternatives in an EIR by stating that in addition to determining a project's significant environmental impacts and indicating potential means of mitigating or avoiding those impacts, "the purpose of an environmental impact report is to identify alternatives to the project."

Pursuant to CEQA Guidelines Section 15126.6(a), an EIR must describe a reasonable range of alternatives to the proposed project or to the project's location that would feasibly avoid or lessen its significant environmental impacts while attaining most of the proposed project's objectives. CEQA Guidelines Section 15126.6(b) emphasizes that the selection of project alternatives be based primarily on the ability to reduce impacts relative to the proposed project. In addition, CEQA Guidelines Section 15126.6(e)(2) requires the identification and evaluation of an "Environmentally Superior Alternative".

Pursuant to CEQA Guidelines Section 15126.6(d), discussion of each alternative presented in this EIR Section is intended "to allow meaningful evaluation, analysis, and comparison with the proposed project." As permitted by CEQA, the significant effects of each alternative are discussed in less detail than those of the proposed Project, but in enough detail to provide perspective and allow for a reasoned choice among alternatives to the proposed Project.

In addition, the "range of alternatives" to be evaluated is governed by the "rule of reason" and feasibility, which requires the EIR to set forth only those alternatives that are feasible and necessary to permit an informed and reasoned choice by the lead agency and to foster meaningful public participation (CEQA Guidelines Section 15126.6(f)). CEQA generally defines "feasible" to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors and other considerations (CEQA Guidelines Sections 15091(a)(3), 15364).

Based on the CEQA requirements described above, the alternatives addressed in this EIR were selected in consideration of one or more of the following factors:

- The extent to which the alternative could avoid or substantially lessen any of the identified significant environmental effects of the proposed Project;
- The extent to which the alternative could accomplish the objectives of the proposed Project;
- The potential feasibility of the alternative;
- The appropriateness of the alternative in contributing to a "reasonable range" of alternatives that would allow an informed comparison of relative advantages and disadvantages of the proposed Project and potential alternatives to it; and
- The requirement of the *CEQA* Guidelines to consider a "no project" alternative; and to identify an "environmentally superior" alternative in addition to the no project alternative (CEQA Guidelines Section 15126.6(e)).

Neither the CEQA statute, the CEQA Guidelines, nor recent court cases specify a specific number of alternatives to be evaluated in an EIR. Rather, "the range of alternatives required in an EIR is governed by the rule of reason that sets forth only those alternatives necessary to permit a reasoned choice" (CEQA Guidelines 15126(f)).

8.2 SIGNIFICANT ENVIRONMENTAL EFFECTS

CEQA requires the alternatives selected for comparison in an EIR to avoid or substantially lessen one or more significant effects of the Project being evaluated. This analysis evaluates both the potential to avoid or reduce a significant and unavoidable impact, and to avoid the need for mitigation to obtain less than significance levels.

The analysis in Chapter 5 of this Draft EIR determined that significant and unavoidable Project-specific and cumulative air quality and greenhouse gas impacts would occur, as outlined below. Potentially significant impacts of the Project related to noise, recreation, tribal cultural resources, and utilities can be mitigated to a less than significant level.

8.2.1 Significant and Unavoidable Impact

Impact AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

The results of the Localized Significance Thresholds (LST) analysis indicate that the Project would result in an exceedance of the South Coast Air Quality Management District (SCAQMD) LST threshold for PM_{10} during operation. The level of emissions from a project does not necessarily correspond to the concentrations of air pollutants. A dispersion modeling analysis would be necessary to calculate health risk from project implementation. Current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences. For this reason, it is not feasible to provide such an analysis within this EIR.

Once a specific project is proposed, it would be required to conduct a site-specific localized impact analysis that evaluates potential project health impacts at a project level relative to immediate adjacent land uses. Mitigation Measure AQ-1 requires a project-specific assessment of potential localized impacts for future projects and if future projects exceed the applicable LST thresholds, a dispersion modeling analysis would be necessary to calculate health risk from project implementation. While Mitigation Measure AQ-1 would serve to reduce localized emissions associated with buildout of the project, localized emission impacts would remain significant and unavoidable.

Impact GHG-1 Generate greenhouse gas emissions that may have a significant impact on the environment.

The Project assumes future buildout of 413 residential units and 118,474 square feet (SF) of additional nonresidential uses (total buildout of 205,610 SF nonresidential uses). The proposed Project would be anticipated to result in 12,804.0 MTCO2e of greenhouse gas (GHG) net new emissions (project build out plus existing use) at full buildout, which exceeds the SCAQMD threshold of 3,000 MTCO2e that has been applied to the Project. Therefore, the Project would result in a significant and unavoidable impact on Project-level and cumulative GHG emissions. Mitigation Measure GHG-1 is included to require a project-specific assessment of potential GHG impacts and implementation of feasible mitigation measures to reduce GHG emissions for future projects allowed under the proposed Project. However, GHG impacts would remain significant and unavoidable with implementation of Mitigation Measure GHG-1.

Impact GHG-2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Although the proposed Project would be consistent with the identified measures and goals from the CARB's 2022 Scoping Plan and SCAG's 2024–2050 RTP/SCS (Connect SoCal), the proposed Project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the proposed Project would not comply with existing State regulations adopted to achieve the overall GHG

emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed Project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHG and this impact would be significant and unavoidable.

8.2.2 Impacts Mitigated to Less than Significant

Impact NOI-1 Generate a substantial increase in ambient noise levels in the vicinity of the Project.

The Project and adjacent offsite land uses would be potentially exposed to stationary-source noise impacts from the proposed onsite heating, ventilation, and air conditioning (HVAC) equipment and truck deliveries and loading and unloading activities. It is expected that on-site stationary sources would meet the City of Tustin maximum noise level standards. However, given that specific details related to stationary impacts of future development within Enderle Center are not known at this time and will not be known until a development project is proposed, Mitigation Measure NOI-1 is included. Mitigation Measure NOI-1 would require all future development projects to prepare a project-specific Final Acoustical Report that identifies any noise reduction features for the proposed development. With implementation of Mitigation Measure NOI-1, noise impacts would be less than significant.

Impact TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource.

Project construction would include excavation at depths that could reach native, undisturbed soils that may contain unknown tribal cultural resources. Project excavation and construction could result in impacts to inadvertent tribal cultural resource finds that could cause substantial adverse change to the significance of such resources. Mitigation Measures TCR-1, TCR-2, and TCR-3 were developed in coordination with the Gabrieleño Band of Mission Indians – Kizh Nation and included in the Project. Future development associated with the Project would be required to adhere to Mitigation Measures TCR-1, TCR-2, and TCR-3. Mitigation Measure TCR-1 requires the retention of a Native American Monitor prior to of the issuance of a demolition or grading permit for projects involving ground-disturbing activities; Mitigation Measure TCR-2 provides procedures to follow in case of an inadvertent tribal cultural resource discovery; and Mitigation Measure TCR-3 provides procedures to follow in case of an unanticipated discovery of human remains and associated funerary or ceremonial objects. Implementation of Mitigation Measures TCR-1, TCR-2, and TCR-3 would ensure that potential impacts a result of the inadvertent discovery of TCRs during future development would be less than significant.

Impact UT-1 Require or result in the relocation or construction of new water facilities, or expansion of existing facilities, the construction of which would cause significant environmental effects.

Future implementation of development projects as a result of the proposed Project would include installation of onsite water infrastructure and new connections to the water distribution system. The new water infrastructure and new connections would be sized to accommodate the increased water demand of new project-specific development on a project-by-project basis. Water supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of water distribution facilities and would be verified during plan check (PPP UT-1). In addition, Mitigation Measure UT-1 is included to require future projects to coordinate with the City and prepare a capacity analysis of existing water utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by the City prior to the approval of construction permits. With implementation of Mitigation Measure UT-1, impacts would be less than significant.

Impact UT-3 Require or result in the relocation or construction of new wastewater facilities, or expansion of existing facilities, the construction of which would cause significant environmental effects.

Future implementation of development projects as a result of the proposed Project would include installation of onsite wastewater infrastructure and new connections to the wastewater distribution system. The new wastewater infrastructure and new connections would be sized to accommodate the increased wastewater demand of new project-specific development on a project-by-project basis. Wastewater supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of wastewater distribution facilities and would be verified during plan check (PPP UT-1). Additionally, Mitigation Measure UT-2 is included to require future projects to coordinate with EOCWD and prepare a capacity analysis of existing wastewater utilities in the area to ensure conveyance and pressure is adequate. With implementation of Mitigation Measure UT-2, impacts would be less than significant.

Impact UT-4 Result in a determination by the wastewater treatment provider that would serve the Project that it has adequate capacity to serve the Project's projected demand in addition to existing commitments.

Wastewater from the Project Site is treated at OC San's wastewater treatment plant in Fountain Valley (Plant No. 1). Plant No. 1 has a total rated primary capacity of 108 MGD and a secondary treatment capacity of 80 MGD. Thus, the amount of wastewater that would be generated by the proposed Project is less than 1 percent of Plant No. 1's total remaining daily treatment capacity. Mitigation Measure UT-2 is incorporated into the Project to require future projects to coordinate with EOCWD and prepare a capacity analysis of existing wastewater utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by EOCWD and the City prior to the approval of construction permits. With implementation of Mitigation Measure UT-2, impacts would be less than significant.

8.3 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (14 California Code of Regulations [CCR]) requires "A statement of objectives sought by the proposed project. A clearly written statement of objectives would help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and would aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project." The primary purpose and goal of the Project is to accommodate the City's 6th Cycle RHNA identified within the City of Tustin 2021-2029 Housing Element. The Project would achieve this goal through the following objectives:

a. Creation of a Housing Overlay District to allow residential development at densities to achieve the estimated capacities determined in the Housing Element and without inhibitors to residential development.
b. Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.
c. Increase flexibility in allowed uses and development potential in an underutilized area of the City of Tustin.
d. Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

8.4 ALTERNATIVES CONSIDERED BUT REJECTED

Pursuant to State CEQA Guidelines Section 15126.6(c), an EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which

alternatives are potentially feasible and, therefore, merit in-depth consideration, and which are infeasible and need not be considered further. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (State CEQA Guidelines Section 15126.6(f), (f)(3)). This section identifies alternatives considered by the lead agency but rejected as infeasible and provides a brief explanation of the reasons for their exclusion. Alternatives may be eliminated from detailed consideration in the Draft EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects.

Alternate Site Alternative. An alternate site for the Project was eliminated from further consideration. Any alternate site would need to occur within the City of Tustin. The City is required by state law to rezone housing shortfall sites according to what has been approved under the certified Housing Element (Government Code § 65583.2, Senate Bill 197). The site identified within the City's 2021-2029 Housing Element is Enderle Center (Project site), and an alternate site would fail to meet most of the project objectives, is infeasible, and would not be compliant with state law or the City's Housing Element. Additionally, if the Project were to occur on an alternate site and rezoning were conducted within a different commercial center in the City, similar impacts would result and comparable mitigation would be required; therefore, impacts would not be reduced under this alternative. Therefore, this alternative has been determined infeasible.

No Project/Buildout of Existing Land Use Alternative. Under this alternative, buildout of the nonresidential uses would occur as permitted under the existing land use designations, but the Project site would not be rezoned to allow for residential uses. This alternative was eliminated from further consideration. The City is required by state law to rezone housing shortfall sites according to what has been approved under the certified Housing Element (Government Code § 65583.2, Senate Bill 197). The site identified within the City's 2021-2029 Housing Element is Enderle Center (Project site) and failing to rezone the site for future housing would fail to meet all of the project objectives, which would therefore render the alternative as infeasible, and further, would not be compliant with state law or the City's Housing Element.

Reduced Project Development. The Reduced Project Development alternative would redesignate the Project site to allow for development of future residential and additional square footage of nonresidential development, similar to the proposed Project. However, Project buildout would be reduced by 20 percent for residential and by 95 percent for new nonresidential; thereby limiting the overall future buildout to a maximum of 330 residential units and a buildout of 91,923 SF nonresidential uses (including 4,787 SF of additional nonresidential development and 87,136 SF of existing nonresidential development). This alternative would still require approval of the Housing Overlay (HO) District, a General Plan Amendment (GPA), adoption of a Zone Change (ZC), adoption of a zoning code amendment (CA), and development of Objective Design Standards (ODS). This alternative would eliminate the Project's significant and unavoidable GHG impact by reducing GHG emissions 77 percent, from 12,804 MT CO2e/yr. net new emissions (Project buildout minus existing use) to 2,999 MT CO2e/yr, proportional to the proposed reduction in development. However, under this alternative, only five percent of the additional nonresidential square footage (above and beyond what is existing) currently allowed under existing provisions would be developed. Furthermore, under this alternative, only 330 dwelling units would be allowed to be constructed and the City would have an 83 dwelling unit deficit in meeting their state mandated RHNA fair share. Because this alternative would not meet the City's legal obligation to rezone the site to meet the necessary residential capacity consistent with the City's certified Housing Element Update, this alternative has been rendered infeasible and is rejected from further consideration.

8.5 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Two alternatives to the Project have been identified for further analysis as representing a reasonable range of alternatives that attain most of the objectives of the Project, may avoid or substantially lessen any of the significant effects of the Project, and are feasible from a development perspective. These alternatives have

been developed based on the criteria identified in Section 8.1. The following alternatives are further described and analyzed in Section 8.6.

Alternative 1: No Project/No Development Alternative. This alternative consists of the Project not being approved, and the Project site would remain in the conditions that existed at the time the Notice of Preparation was published (February 16, 2024).

Alternative 2: Reduced Nonresidential Project Alternative. The Reduced Nonresidential Project alternative would allow for the same potential future development of housing units to occur as proposed by the Project, but limiting the buildout of nonresidential uses to 35 percent of the capacity in the General Plan. The Reduced Nonresidential Project Alternative would allow for the potential future buildout of 413 residential units and 46,510 SF of new nonresidential development in addition to the existing shopping center. The reduced nonresidential square footage would allow for increased setbacks, passenger vehicle parking, and truck parking. Areas planned for physical impact would be identical to those required for development of the proposed Project. This alternative would still require a General Plan Amendment (GPA), adoption of a Zone Change (ZC) and a Zoning Code Amendment (CA), and development of Objective Design Standards (ODS).

8.6 ALTERNATIVE 1: NO PROJECT/NO DEVELOPMENT

Pursuant to State CEQA Guidelines Section 15126.6(e), this Draft EIR is required to "discuss the existing conditions at the time the Notice of Preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services […] In certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained."

The No Project/No Development Alternative allows decision-makers to compare the environmental impacts of approving the proposed Project to the environmental impacts that would occur if the Project site were to be left in its existing conditions for the foreseeable future. Under the existing conditions, the Project site is currently developed with 87,136 SF of commercial business, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas. Additional details and figures regarding the existing conditions at the Project site are included in Section 4, *Environmental Setting*.

8.6.1 Environmental Impacts

Air Quality

Under this alternative no new development would occur in the Project site, and as such, no new stationary sources of air pollution would be introduced. Although the Project's construction and operational air quality emissions would be below applicable SCAQMD thresholds for VOCs, NO_X, CO, SO_X, and $PM_{2.5}$, this alternative would avoid the Project's less than significant impacts related to increase of these criteria pollutants. In addition, this alternative would avoid the Project's significant and unavoidable impacts related to exposure of sensitive receptors due to the Project's exceedance of the PM_{10} LST during operations. Therefore, the No Project/No Development Alternative would result in no impact and impact would be less than the proposed Project.

Energy

No construction activities would occur at the Project site or operation of new structures that would increase consumption of energy sources under this alternative. Existing commercial uses onsite would continue standard

operation and vehicles would continue to be used for traveling to and from the site. Electricity, gasoline, and diesel fuel usage would all be lower for the existing commercial uses than for the Project. While this Draft EIR determined the Project's impacts to energy would be less than significant, increased energy use associated with this alternative would not occur. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Greenhouse Gas Emissions

No new construction activities would occur at the Project site or operation of new structures that would generate GHGs under this alternative. Under this alternative, no additional vehicle trips would be introduced to the Project site, which is the source of most of the greenhouse gas emissions of the proposed Project as discussed in Section 5.3, *Greenhouse Gas Emissions*. This alternative would be consistent with all applicable air quality plans and would avoid the significant and unavoidable impact of greenhouse gas emissions that would occur from the proposed Project. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Land Use

This alternative would not result in new development, and as such, there would be no potential for land uses to be introduced that would indirectly result in environmental impacts due to a conflict with an existing land use plan. While the proposed residential use is not currently allowed by the land use designation of the site, the existing use would continue to be allowed to operate and no new land uses would be introduced to the site. Under this alternative no General Plan Amendment would be required. Overall, this alternative would result in no impacts to land use and planning, and therefore, would be less than the Project's impacts.

Noise

Under this alternative, no development would occur onsite, and no new sources of noise would be introduced at the Project site. Since no new development would occur and no additional traffic trips would be generated, this alternative would not contribute to additional traffic noise. Mitigation necessary to ensure the Project does not result in noise impacts on surrounding land uses would not be required under the No Project/No Development alternative because no additional development would be proposed. In addition, this alternative would not result in construction onsite and no construction noise or vibration would occur. Therefore, this alternative would avoid the Project's less than significant impact and required mitigation related to potential noise impacts of future development on surrounding land uses. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Population and Housing

This alternative would not result in new development, and as such, would not result in induced growth or displacement affecting population and housing. However, this alternative would also not result in the benefit of adding new housing to the city, which would help result in a more balanced jobs-housing ratio. Additionally, the No Project/No Development Alternative would not be consistent with Housing Element or meet the SCAG and state-mandated fair share Regional Housing Needs Allocation (RHNA). The City would be faced with severe penalties from the State. Therefore, the No Build Alternative could result in a significant and unavoidable impact. Overall, this alternative would result in greater impacts than the Project.

Public Services

This alternative would not result in new development, and as such, would not result in increased demand for public services such as fire and police services, school services, library services, or health services that require

the new construction of public facilities. Therefore, while the Project's impacts would be less than significant through compliance with regulatory programs, this alternative would result in less impacts.

Recreation

This alternative would not result in new development, and as such would not result in any new residences that would potentially impact nearby parks or require the development of additional park facilities. However, this alternative would also not result in the payment of the City's development impact fees when required by the Tustin City Code. Therefore, while the Project's impacts would be less than significant with mitigation, this alternative would result in less impacts.

Transportation

This alternative would not result in new development, and as such, would not result in any trips or traffic related to operation of the Project site beyond vehicle trips associated with existing commercial operations. This alternative would not impact existing transit service and alternative transportation facilities within the Project site. The proposed Project would result in less than significant impacts related to VMT, geometric hazards, and emergency access. As such, this alternative would result in less impacts than the proposed Project.

Tribal Cultural Resources

Under this alternative, existing conditions would remain, and no new development would occur. No grading would occur and there would be no potential impacts to tribal cultural resources that may be buried below ground. Although mitigation would ensure that the Project would result in less than significant impacts on tribal cultural resources, this alternative would avoid all potential impacts to tribal cultural resources, and no mitigation measures would be required. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Utilities and Service Systems

Under this alternative, existing conditions would remain, and no new development would occur. No additional configurations or connections to existing domestic water, wastewater, stormwater drainage, electric power, natural gas, or telecommunication facilities would be needed under this alternative, and there would be no change in the demand for domestic water or wastewater treatment services. This alternative would also not result in increased demand for solid waste collection and disposal. Selection of this alternative would result in no impact to utilities and service system providers. While mitigation would ensure that the Project would result in less than significant impacts, this alternative would avoid the need for mitigation, and no impacts related to utilities and service systems would occur. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

8.6.2 Conclusion

Ability to Reduce Impacts

The No Project/No Development Alternative would result in continuation of the existing uses within the Project site, and the proposed development would not occur. As a result, this alternative would avoid the need for mitigation measures that are identified in Chapter 5.0 of this Draft EIR, which include measures related to air quality, greenhouse gas emissions, noise, tribal cultural resources, and utilities. This alternative would also avoid the significant and unavoidable impacts to air quality and greenhouse gases. However, this alternative could result in a significant and unavoidable impact on population and housing due to noncompliance with

the City's certified Housing Element and the City's inability to meet its state mandated RHNA. This alternative would result in lessened impacts to 10 of the 11 environmental topics analyzed in this Draft EIR (see Table 8-1).

However, the environmental benefits of the proposed Project would also not be realized, including providing housing onsite that would result in a better jobs-housing balance in Tustin, which is currently considered jobs-rich.

Ability to Achieve Project Objectives

As shown in Table 8-2, below, the No Project/No Development Alternative would not meet any of the Project objectives. The purpose of the Project is to rezone the Project site to be consistent with the City Housing Element Updated recently adopted by the City. The No Build Alternative would not result in rezoning to allow residential development at densities to achieve the estimated capacities determined in the certified Housing Element, and without inhibitors to residential development, such as overly stringent standards. It would also not increase the number of housing opportunities available in Tustin, increase flexibility in allowed uses and development potential in the City of Tustin or promote a diverse housing stock with a wide range of sizes and affordability.

8.7 ALTERNATIVE 2: REDUCED NONRESIDENTIAL PROJECT ALTERNATIVE

Alternative 2: Reduced Nonresidential Project Alternative. The Reduced Nonresidential Project alternative would allow for the potential future buildout of 413 residential units and 46,510 SF of new nonresidential use over a maximum of 11.80 acres. The number of residential units and maximum acres would be the same as the development assumption under the proposed Project, but with a decrease in total nonresidential use of 35 percent. The total operational uses of this alternative, inclusive of existing Enderle Center uses, would result in a buildout of 413 residential units and 133,641 SF of nonresidential uses.

The reduced nonresidential square footage would allow for increased setbacks, passenger vehicle parking, and truck parking. Areas planned for physical impact would be identical to those required for development of the proposed Project. Consistent with the proposed Project, specific infrastructure improvements are not known at this time and would not be known until a development project is proposed. Future infrastructure improvements may include roadways and utilities, drains, wastewater, water, and dry utilities. This alternative would still require a General Plan Amendment (GPA), and adoption of a Zone Change (ZC) and a Zoning Code Amendment (CA).

8.7.1 Environmental Impacts

Air Quality

Under this alternative, the same number of housing units (413) and approximately 35 percent less buildout of nonresidential uses would be developed. Under this alternative, the intensity of construction would be reduced as compared to the proposed Project, and overall emissions would be reduced with those identified for the Project.

Operation of the proposed Project would result in 4.2 lbs/day PM_{10}, which exceeds the SCAQMD Localized Significance Thresholds (LST) of 3.0 lbs/day for PM_{10}. The majority of PM_{10} emissions from the Project are associated with mobile sources from Project-related vehicle trips. PM_{10} emissions from the 413 residential units alone are 0.65 lbs/day, and PM_{10} emissions from nonresidential uses are 3.5 lbs/day.

A reduction of 35 percent building area for nonresidential uses would reduce nonresidential PM_{10} emissions to 2.3 lbs/day. As such, operational PM_{10} emissions under this alternative would total 2.95 lbs/day, inclusive

of 0.65 lbs/day from residential and 2.3 lbs/day from nonresidential, which is below the SCAQMD LST threshold of 3.0 lbs/day. Therefore, this alternative's operational impact on air quality emissions would be less than the Project's significant and unavoidable impacts and would be less than significant. No mitigation measures would be required under this alternative.

Energy

Under this alternative, the Project site would be developed with 413 residential units and 46,510 SF new nonresidential development (for a total buildout of 133,641 SF of nonresidential development). Under this alternative, the intensity of construction would be less than the proposed Project because construction time would be reduced due to a reduction of nonresidential square footage. Furthermore, operational energy demand would also be less than the Project because of a reduction in nonresidential uses. Overall, energy demand would be reduced under this alternative during construction and operation. Therefore, the Reduced Nonresidential Project alternative would continue to result in a less than significant impact and would be less than Project impacts.

Greenhouse Gas Emissions

Under the Reduced Nonresidential Project alternative, approximately 35 percent less nonresidential development would occur within the Project site. Therefore, a reduced volume of construction activities and related production of GHG emissions would occur. In addition, the reduced amount of development by this alternative would result in less stationary source emissions from onsite equipment, and less traffic associated GHG emissions than the proposed Project. Therefore, the overall volume of GHG emissions would be reduced in comparison to the proposed Project.

A majority of operational emissions under this alternative would be from nonresidential uses, and residential uses would result in a negligible amount of GHG emissions. The proposed Project total buildout would result in an annual emissions of 19,891 MTCO2e/yr., inclusive of 7,138 MTCO2e/yr. from existing uses. As such, it is expected that GHG emissions from this alternative would be less as compared to the proposed Project, but would continue to exceed the screening threshold of 3,000 MTCO2e/yr. Like the Project, this alternative would implement Mitigation Measure GHG-1 that requires future project applicant to prepare a technical assessment that evaluates potential project-related GHG impacts; and to incorporate mitigation measures to reduce GHG emissions, if applicable. As such, consistent with the proposed Project, the Reduced Nonresidential Project Alternative would result in a significant and unavoidable impact on GHG, but this impact would be less than the Project.

Land Use

Under this alternative, the 11.80-acre site would be developed with 413 residential units and 46,510 SF of new nonresidential development (for a total buildout of 133,641 SF nonresidential development). Consistent with the Project, a GPA, ZC and CA would be required to accommodate residential uses within the Project site. The GPA and ZC would require the City to establish a limit ("cap") on the amount of commercial development that is currently authorized under the General Plan. This alternative would be similar in that it would be consistent with all applicable plans and policies and would result in similar development as the Project and meet all applicable Project initiatives. The Reduced Nonresidential Project Alternative would be subject to the same goals, policies, programs, and regulations as the Project. Therefore, the Reduced Nonresidential Project Alternative would result in similar less than significant impacts as the proposed Project.

Noise

Under this alternative, the southern portion of the Project site would be developed with 413 dwelling units and 46,510 SF of new nonresidential development (for a total [existing plus new] of 133,641 SF nonresidential development). The construction of this alternative would require site clearing, grading, and construction activities similar to the proposed Project. However, under this alternative, construction activities would occur for a shorter period of time due to the 35 percent reduction in nonresidential development. Therefore, the construction noise impacts would remain less than significant, but would be lessened compared to the Project.

Buildout of the proposed Project is anticipated to generate approximately 4,412 net new ADT, including 313 new trips during the AM peak hour and 393 new trips during the PM peak hour. The increase in Project-related traffic noise would be no greater than 2.3 dBA from existing baseline conditions which is below the threshold of a 3.0 dBA noise level increase. This alternative is anticipated to generate fewer new trips as compared to the proposed Project because of the 35 percent reduction in nonresidential uses. As such, noise impacts under this alternative would continue to be less than significant and would be less than the proposed Project.

Similar to the proposed Project but to a lesser extent, the Project site and adjacent offsite land uses would be potentially exposed to stationary-source noise impacts from the proposed onsite heating, ventilation, and air conditioning (HVAC) equipment and truck deliveries and loading and unloading activities under this alternative. It is expected that on-site stationary sources would meet the City of Tustin maximum noise level standards. This alternative would also require implementation of Mitigation Measure NOI-1, that requires preparation of a project-specific Final Acoustic Report for future development projects. Therefore, the Reduced Nonresidential Project Alternative would result in a less than significant impact with mitigation and would be less than Project impacts.

Population and Housing

Under this alternative, the 11.80-acre Project site would be developed with 413 dwelling units and 46,510 SF of new nonresidential development (for a total buildout of 133,641 SF nonresidential development). Using employment generation rates from the 2001 SCAG Employment Density Report, buildout of the new 46,510 SF of nonresidential space would result in approximately 143 new employees (1 employee per 325 SF). The Reduced Nonresidential Project Alternative would result in the same number of dwelling units and residents. Similar to the Project, this alternative would not exceed projections for the City. In addition, because the area is jobs-rich, the addition of residential units in the area would not require additional jobs that could result in growth. Conversely, the new residents would fill the need for employees that are anticipated by SCAG projections. Additionally, the Project is in fulfillment of the City's RHNA, which is allocated by SCAG, and therefore, this alternative would support the City in meeting the planned population growth for the larger region. The Reduced Nonresidential Project Alternative would result in a less than significant impact on population. Therefore, this alternative would result in similar less than significant impacts as the Project. Overall, the Reduced Nonresidential Project Alternative would result in similar impacts as the Project.

Public Services

Under this alternative, the 11.80-acre Project site would be developed with 413 dwelling units and new 46,510 SF of nonresidential development (for a total buildout of 133,641 SF nonresidential development). Construction of this alternative would result in a slightly decreased demand for public services based on the decreased amount of employment generated. The same fire and sheriff's stations would serve the alternative, and the decrease in square footage developed would likely incrementally decrease the amount

of service calls received by these public services compared to the proposed Project. In addition, this alternative would also require the payment of development impact fees imposed by the City, although the amount of fees would likely be reduced. Through implementation of regulatory requirements, impacts would be less than significant. Therefore, this alternative would result in similar less than significant impacts as the proposed Project.

Recreation

As described in Section 5.6, *Population and Housing*, the Project is anticipated to result in 1,189 residents at full occupancy. The Reduced Nonresidential Project Alternative would result in the same number of residents, which results in a demand for approximately 3.57 acres of parkland to support the additional residents. Tustin City Code Article 9, Chapter 3, Part 3, Section 9331(d) (Parkland Dedication) requires certain residential projects to dedicate parkland or pay parkland dedication and development fee provisions. The Reduced Nonresidential Project Alternative could include future development of housing that would be subject to Parkland Dedication, the same as the proposed Project. This alternative would result in a less than significant impact, and would result in similar impacts as the Project.

Transportation

Under this alternative, the 11.80-acre Project site would be developed with 413 dwelling units and 46,510 SF new of nonresidential development (for a total buildout of 133,641 SF nonresidential development). The total nonresidential development would be reduced by 35 percent from the proposed Project's buildout (71,962 SF less). Therefore, the Reduced Nonresidential Project alternative would result in fewer trips as compared to the Project. The Reduced Nonresidential Project alternative would remain in a low VMT area "per employee" and would therefore be screened out from further VMT analysis for nonresidential development per the City VMT standards. The Project would propose the same number of housing units, and therefore this alternative's home-based VMT per capita would be 19.7 percent below the City's threshold under base conditions and 18.7 percent below the City's threshold under future conditions; therefore, the residential portion of the Reduced Nonresidential Project alternative would result in a less than significant VMT impact. Similar to the Project, this alternative would not impact existing or planned transportation facilities, including pedestrian facilities, bicycle facilities, and public transportation infrastructure or operation. Therefore, the Reduced Nonresidential Project Alternative would result in a less than significant impact and would result in similar impacts as the Project.

Tribal Cultural Resources

Under this alternative, disturbances would occur to the 11.88-acre site. Project construction would require grading and excavation and could result in potential impacts to tribal cultural resources that may be buried below ground. Mitigation Measure TCR-1, TCR-2 and TCR-3 would reduce tribal cultural resource impacts to less than significant levels, similar to the Project. Areas planned for physical impact would be identical to those required for development of the proposed Project. Therefore, the Reduced Nonresidential Project Alternative would result in similar impacts as the proposed Project.

Utilities and Service Systems

Under this alternative, the 11.80-acre Project site would be developed with 413 dwelling units and 46,510 SF of new nonresidential development (for a total buildout of 133,641 SF nonresidential development).

The level of development onsite would be decreased under this alternative as compared to the proposed Project. Future development projects under both the Project and this alternative would require new installation of onsite water infrastructure and new connections to the water distribution systems; like the

Project, this alternative would include Mitigation Measure UT-1 to require future projects to coordinate with the City and prepare a capacity analysis of existing water utilities in the area to ensure conveyance and pressure is adequate.

Furthermore, future development projects under both the Project and this alternative would require new installation of onsite wastewater infrastructure and new connections to the wastewater distribution systems; like the Project, this alternative would include Mitigation Measure UT-2 to require future projects to coordinate with East Orange County Water District (EOCWD) and prepare a capacity analysis of existing wastewater utilities in the area to ensure conveyance and pressure is adequate.

This alternative would result in a decrease in nonresidential square footage and would generate less solid waste than the proposed Project.

Although impacts would be decreased under this alternative due to the decrease in nonresidential uses and associated demand for utilities and service systems, impacts would continue to be less than significant with implementation of Mitigation Measure UT-1 and Mitigation Measure UT-2. Overall, this alternative would also result in less than significant impacts related to utilities and service systems but would result in a decrease in impacts in comparison to the proposed Project.

8.7.2 Conclusion

Ability to Reduce Impacts

The Reduced Nonresidential Project Alternative would allow for the potential future buildout of 413 dwelling units and 46,510 SF of new nonresidential development (for a total buildout of 133,641 SF nonresidential development) within the 11.80-acre site. Development under the Reduced Nonresidential Project Alternative would reduce nonresidential square footage by approximately 35 percent. The reduced square footage would allow for increased setbacks, passenger vehicle parking, and truck parking. Areas planned for physical impact on and offsite would be identical to those required for development of the proposed Project.

Mitigation measures for GHG, noise, recreation, tribal cultural resources, and utilities and service systems would still be applicable to this alternative. Although, the Reduced Nonresidential Project Alternative would generally result in a reduction of impacts due to the 35 percent reduction in nonresidential uses, this alternative would only reduce the impact level of one of the 11 environmental topics analyzed in this Draft EIR (operational air quality impacts) from significant and unavoidable with mitigation, to less than significant (see Table 8-1). Furthermore, impacts to GHG would continue to be significant and unavoidable (although slightly less).

Ability to Achieve Project Objectives

As shown in Table 8-2, below, the Reduced Nonresidential Project Alternative would meet all of the Project objectives. This alternative would be consistent with what was planned for in the City's Housing Element Update. The Reduced Project Alternative would allow for the creation of a Housing Overlay District to allow residential development at densities to achieve the estimated capacities determined in the Housing Element and without inhibitors to residential development. This alternative would also increase the number of housing opportunities available in Tustin, increase flexibility in allowed uses and development potential in an underutilized area of the City of Tustin, and promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

8.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative" when significant environmental impacts result from a proposed Project. The No Project/No Development Alternative is environmentally superior.

However, State CEQA Guidelines Section 15126.6(3)(1) states:

> *The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.*

Therefore, pursuant to CEQA, because the No Project/No Development Alternative has been identified as the Environmentally Superior Alternative, the Environmentally Superior Alternative among the other alternatives would be Alternative 2: Reduced Nonresidential Project Alternative.

Alternative 2 would allow for the potential future buildout of 413 dwelling units and 46,510 SF of new nonresidential development (for a total buildout of 133,641 SF nonresidential development) within the 11.80-acre site. Development under the Reduced Nonresidential Project Alternative would reduce nonresidential square footage by approximately 35 percent. This alternative would avoid the Project's significant and unavoidable operational air quality impacts to sensitive receptors. This alternative would not require implementation of Mitigation Measure AQ-1 because the reduction of 35 percent building area for nonresidential uses would reduce PM_{10} emissions below SCAQMD thresholds. Moreover, the Reduced Nonresidential Project Alternative would meet the Project objectives to the same extent as the Project.

However, this alternative would be required to implement applicable mitigation measures regarding GHG, noise, tribal cultural resources, and utilities and service systems, similar to the Project. Impacts to GHG would continue to be significant and unavoidable.

CEQA does not require the Lead Agency (City of Tustin) to choose the environmentally superior alternative. Instead, CEQA requires the City to consider environmentally superior alternatives, weigh those considerations against the environmental impacts of the proposed Project, and make findings that the benefits of those considerations outweigh the harm. Table 8-1 provides, in summary format, a comparison between the level of impacts for each alternative and the proposed Project. In addition, Table 8-2 provides a comparison of the ability of each of the alternatives to meet the objectives of the proposed Project.

Table 8-1: Impact Comparison of the Proposed Project and Alternatives

	Proposed Project	Alternative 1 No Project/ No Development	Alternative 2 Reduced Nonresidential Project
Air Quality	Significant and unavoidable	No impact (less than the Project)	Less than significant (less than the Project)
Energy	Less than significant	No impact (less than the Project)	Less than significant (less than the Project)
Greenhouse Gases	Significant and unavoidable	No impact (less than the Project)	Significant and Unavoidable (less than the Project)
Land Use and Planning	Less than significant	No impact (less than the Project)	Less than significant (same as the Project)
Noise	Less than significant with mitigation	No impact (less than the Project)	Less than significant with mitigation (same as the Project)
Population and Housing	Less than significant	Significant and Unavoidable (more than the Project)	Less than significant (same as the Project)
Public Services	Less than significant	No impact (less than the Project)	Less than significant (same as the Project)
Recreation	Less than significant	No impact (less than the Project)	Less than significant (same as the Project)
Transportation	Less than significant	No impact (less than the Project)	Less than significant (same as the Project)
Tribal Cultural Resources	Less than significant with mitigation	No impact (less than the Project)	Less than significant with mitigation (same as the Project)
Utilities and Service Systems	Less than significant with mitigation	No impact (less than the Project)	Less than significant with mitigation (less than the Project)
Reduce Impacts of the Project?		Yes	Yes
Areas of Reduced Impacts Compared to the Project		10	4

Table 8-2: Comparison of the Proposed Project and Alternatives' Ability to Meet Objectives

	Project	Alternative 1 No Project/ No Development	Alternative 2 Reduced Project
a. Creation of a Housing Overlay District to allow residential development at densities to achieve the estimated capacities determined in the Housing Element and without inhibitors to residential development	Yes	No	Yes
b. Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.	Yes	No	Yes
c. Increase flexibility in allowed uses and development potential in an underutilized area of the City of Tustin.	Yes	No	Yes
d. Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.	Yes	No	Yes

9. EIR Preparers and Persons Contacted

EIR PREPARERS

City of Tustin

Justina Willkom, Community Development Director

Jay Eastman, Assistant Community Development Director

Samantha Beier, Senior Planner

Jorge Maldonado, Associate Planner

Adrianne DiLeva, Management Analyst II

EPD Solutions, Inc.

Konnie Dobreva, Vice President of Environmental Servies

Meghan Macias, TE, Director of Technical Services

Danielle Thayer, Associate Planner II

Abby Pal, Senior Transportation Planner

Megan Rupard, Assistant Planner

Sam Kelley, Assistant Planner

Jazmin Rodriguez, Assistant Planner

Simon Lin, Assistant Transportation Planner

BFSA Environmental Services

Tracy Stropes, M.A., RPA, Director/Principal Archaeologist

LSA Associates, Inc.

Cara Cunningham, Associate

J.T. Stephens, Executive Vice President

PERSONS CONTACTED

City of Tustin Parks and Recreation Department

Chad Clanton, Director of Parks & Recreation

East Orange County Water District

Jeff Smyth, P.E., Engineering Manager/East Orange County Water District

Orange County Fire Authority

Brian Fennessy, Fire Chief

Tamera Rivers, Management Analyst

Tustin Unified School District

Rina Lucchese, Director of Communications and Community Engagement

Tom Rizzuti, Director of Facilities and Planning

Appendix A
Notice of Preparation, Scoping Comments, and Initial Study

ORANGE COUNTY
CLERK-RECORDER
CEQA FILING COVER SHEET

THIS SPACE FOR CLERK'S USE ONLY

Complete and attach this form to each CEQA Notice filed with the County Clerk-Recorder

TYPE OR PRINT CLEARLY

Project Title

PUBLIC NOTICE/POSTING: ENDERLE CENTER REZONE PROJECT
(GPA-2024-0001, CA-2024-0003, AND ZC--2024-0001)

Check Document being Filed:

- ○ Environmental Impact Report (EIR)
- ○ Mitigated Negative Declaration (MND) or Negative Declaration (ND)
- ○ Notice of Exemption (NOE)
- ◉ Other (Please fill in type): POSTING

FILED IN THE OFFICE OF THE ORANGE
COUNTY CLERK-RECORDER ON February 23, 2024
Posted for 30 **days**

DEPUTY CARINA HERRERA

Filing fees are due at the time a Notice of Determination/Exemption is filed with our office.For more information on filing fees and No Effect Determinations, please refer to California Code of Regulations, Title 14, section 753.5.

TUSTIN

BUILDING OUR FUTURE
HONORING OUR PAST

NOTICE OF PREPARATION AND SCOPING MEETING

DATE: February 15, 2024

TO: Agencies, Organizations, and Interested Parties

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report for the Enderle Center Rezone Project in Compliance with Title 14, Section 15082(a) of the California Code of Regulations

PUBLIC REVIEW: **February 16, 2024, to ~~March 18, 2024~~ March 20, 2024**

The City of Tustin is proposing a General Plan Amendment (GPA) and zone change for the application of a Housing Overlay (HO) district over an existing commercial development known as the Enderle Center. As part of that process, the City intends to prepare an Environmental Impact Report (EIR), pursuant to the requirements of the California Environmental Quality Act (CEQA) for the proposed GPA and zone change, described below. We request your review and comments as to the scope and content of the proposed EIR, as summarized in the Initial Study, available on the City's website at www.tustinca.org/HousingElementRezone, or available at City offices, 300 Centennial Way, Tustin, California, 92780.

AGENCIES: The City requests your review on the scope and content of the environmental information relevant to your agency's statutory responsibilities in connection with the proposed Project, in accordance with California Code of Regulations, Title 14, Section 15082(b). Your agency will need to use the EIR prepared by the City when considering any permits that your agency must issue, or other approval for the project.

ORGANIZATIONS AND INTERESTED PARTIES: The City requests your comments and concerns regarding the environmental issues associated with implementation of the proposed Project.

PROJECT TITLE: Enderle Center Rezone Project (GPA-2024-0001, CA-2024-0003, and ZC-2024-0001)

PROJECT LOCATION: The City is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. The Project site is approximately 11.80 acres and consists of Assessor Parcel Numbers (APNs) 401-251-04, -05, and -06; 401-252-05, -06, -08, -09, and -10; and 401-253-03 and -04. As shown in Figure 1, *Vicinity Map*, the Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by the 55 Freeway, including properties west of Yorba Street.

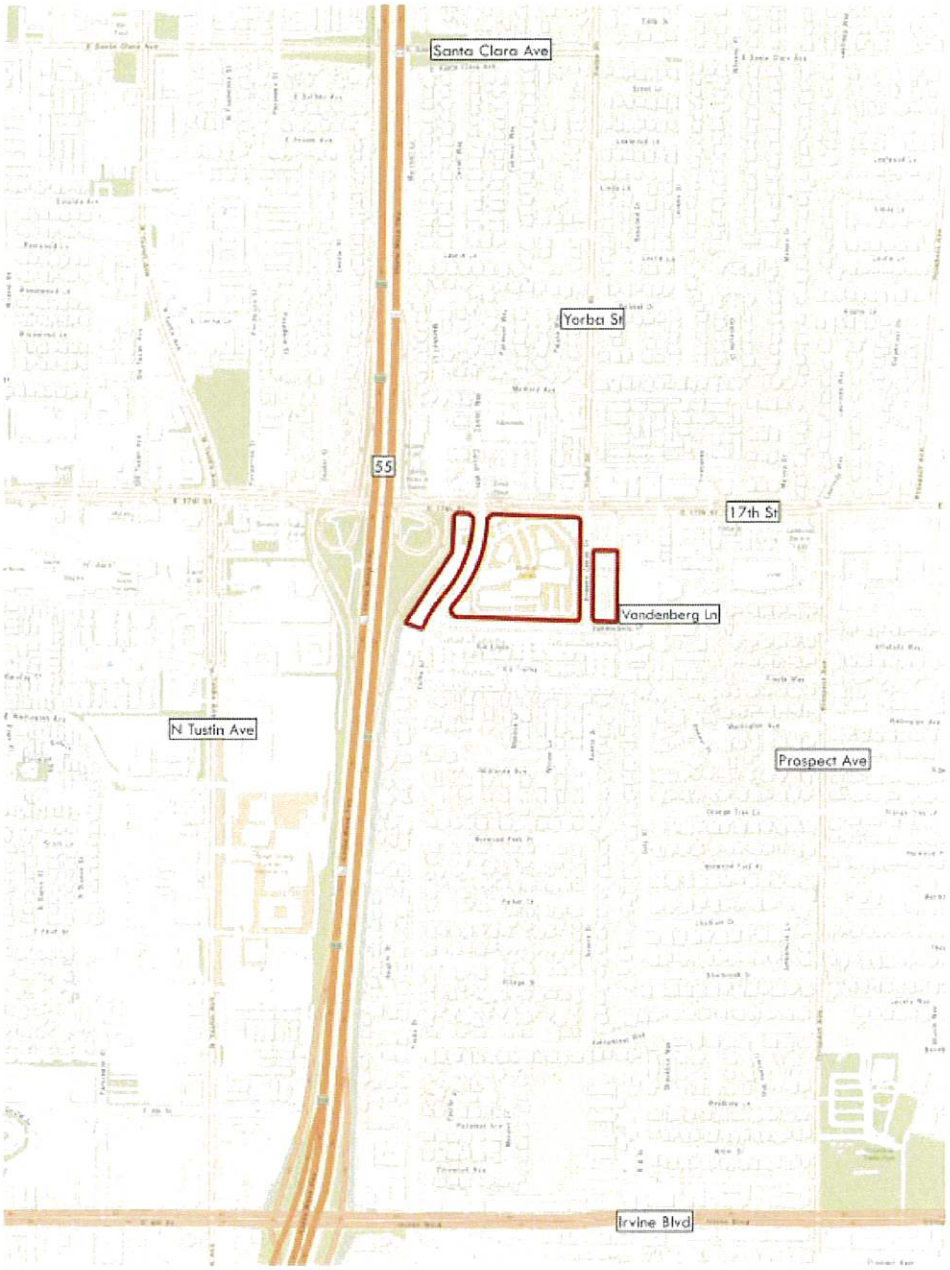
DESCRIPTION: The Enderle Center is an existing commercial development within the City of Tustin. The Enderle Center is currently developed with 87,136 SF of commercial businesses, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and surface parking lots. The City is proposing a Zoning Code Amendment (CA) to create a Housing Overlay (HO) district (Tustin City Code Section 9253), and apply the HO district to the Project site. The proposed land use change is pursuant to the City's 2021-2029 Housing Element Update (HEU), certified by the State of California Housing and Community Development Department (HCD) on September 12, 2022, and adopted by the City on October 4, 2022. The proposed HO district applied to the Project site would allow for future residential development with a maximum density of 413 units over a maximum development area of seven acres. The Initial Study and EIR assume future residential development to occur in the undeveloped parking areas within the Project site.

TUSTIN

BUILDING OUR FUTURE
HONORING OUR PAST

NOTICE OF PREPARATION AND SCOPING MEETING

Figure 1 - Vicinity Map



STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Vacant

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

February 21, 2024

Samantha Beier
City of Tustin
300 Centennial Way
Tustin CA 92780

Re: 2024020747, Enderle Center Rezone Project, Orange County

Dear Ms. Beier:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@NAHC.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

California Department of Transportation

DISTRICT 12
1750 East 4th Street, Suite 100 | SANTA ANA, CA 92705
(657) 328-6000 | FAX (657) 328-6522 TTY 711
https://dot.ca.gov/caltrans-near-me/district-12

March 18, 2024

Samantha Beier
City of Tustin
300 Centennial Way
Tustin, CA 92780

File: LDR/CEQA
SCH#2024020747
LDR LOG #202202499
SR-55, I-5

Dear Ms. Beier,

Thank you for including the California Department of Transportation (Caltrans) in the review of the Notice of Preparation of a Draft Environmental Impact Report for the Enderle Rezone project. The City of Tustin is proposing a General Plan Amendment (GPA) and zone change for the application of a Housing Overlay (HO) district over an existing commercial development known as the Enderle Center. Pursuant to Housing Element Program 1.1f, the city is proposing an overlay zone ("overlay district") for the Project site to add 413 housing units. The anticipated development does not rely on the demolition of any existing buildings, but rather focuses on areas currently used for surface parking. Additionally, the Project anticipates the additional development of 118,467 square feet of nonresidential uses in the future, for a total nonresidential development capacity of 205,603 square feet on the Project site, pursuant to the General Plan. A specific development project is not proposed as part of this Rezoning Project. The Project involves approval of the proposed Housing Overlay, a General Plan Amendment, Zoning Code Amendment, and a Zone Change. The Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by the 55 Freeway, including properties west of Yorba Street.
The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Caltrans is a responsible agency on this project and has the following comments:

1. Due to the proximity of the proposed project to SR-55 potential impacts are anticipated according to Section 5-7. Please submit A Vehicle Miles Traveled (VMT) based Traffic Impact Study (TIS) for this project. Please use the Governor's Office of Planning and research guidance to identify VMT related impacts that includes any potential mitigation measures necessary. If impact analysis leads to findings of significance, please coordinate with Caltrans District 12 Local Development on development of a Traffic Mitigation Agreement or similar efforts.

2. Please refer to OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA and Caltrans' Transportation Impact Study Guide for the VMT assessment. Caltrans' Transportation Impact Study Guide: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf

3. This rezoning will result in an increase of 413 residential units, including affordable housing for low-income individuals. As part of this rezoning and subsequent development, Caltrans encourages the consideration of accompanying complete streets elements, such as bike lanes, and pedestrian safety features, such as curb bump outs, rectangular rapid flashing beacons, and leading pedestrian intervals. These should be considered throughout the project area, as increased residential density provides an opportunity to enhance safety for all road users.

4. Please Provide a discussion of existing bus route services and potential future transit improvement opportunities for all including intercounty and regional connectivity along with connectivity to rail services from the nearest train stations provided by both Metrolink and Amtrak Pacific Surfliner. Encourage the use of transit among future residents, visitors, and workers of the development. Increasing multimodal transportation may lead to a reduction to congestion, Vehicle Miles Traveled, and improve air quality. Provide adequate wayfinding signage and related amenities to the transit stops within the project vicinity roadways.

5. Ensure that truck parking, ingress and egress, and staging will not interfere with vehicle parking, pedestrian paths, or bicycle lanes/bicycle parking.

6. Establish freight pick up & drop off times that do not coincide with peak commute hours to reduce passenger vehicle conflicts and congestion for freight. Consider designating on-street freight-only parking and delivery time windows so trucks will not resort to double parking, thus causing street traffic congestion.

7. For the multifamily residential units proposed, consider how many individual packages will be delivered daily to individual residences. Amazon lockers or an equivalent shared drop-off location can help reduce the amount of driving done by delivery trucks and can increase the efficiency of deliveries.

8. Work with local partners and community representatives to mitigate any truck traffic routing onto residential streets or conflicting with other road users, including and especially bicyclists and pedestrians.

9. In the event of any work performed within Caltrans right-of-way, an encroachment permit will be required prior to construction. Please submit all applications and associated documents/plans via online web portal base Caltrans Encroachment Permit System (CEPS) at https://ceps.dot.ca.gov/

10. Any work performed within Caltrans right of way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction. Prior to submitting to Caltrans Permit's branch, applicant should fill out Applicant's Checklist to Determine Applicable Review Process (QMAP List) Form TR-0416 to determine if project oversight/coordination with Caltrans Project Manager is needed. Applicant must submit a signed Standard Encroachment Permit application form TR-0100 along with a deposit payable to Caltrans. Deposit amount will be dependent on when the application is submitted. Public corporations are legally exempt from encroachment permit fees. Please note that all utility work should be disclosed prior to permit submittal, and utility companies are to apply for separate permits for their corresponding work.

Please continue to coordinate with Caltrans for any future developments that could potentially impact State transportation facilities. If you have any questions, please do not hesitate to contact Maryam Molavi, at Maryam.Molavi@dot.ca.gov.

Sincerely,

Scott Shelley
Branch Chief – Local Development Review/Climate Change/Transit
District 12

ORANGE COUNTY FIRE AUTHORITY

P. O. Box 57115, Irvine, CA 92619-7115 • 1 Fire Authority Road, Irvine, CA 92602-0125

Brian Fennessy, Fire Chief **(714) 573-6000** **www.ocfa.org**

March 19th, 2024
Samatha Beier Senior Planner
SBeler@tustinca.org

(714) 573 3354

Subject: Notice of Preparation of EIR for Enderle Center Tustin Ca

Dear Samatha:

Thank you for the opportunity to review the subject document. The Orange County Fire Authority (OCFA) provides fire protection and emergency medical services response to 23 cities in Orange County and all unincorporated areas. The OCFA operates 78 fire stations throughout Orange County.

We believe that the project will have less than a significant impact.

Please contact me at 714-573-6102 if you have any questions.

Sincerely.

Todd Letterman
Assistant Fire Marshal
Planning and Development
toddletterman@ocfa.org
www.ocfa.org

Enderle Center Rezone Project

Initial Study

Lead Agency:

City of Tustin
300 Centennial Way
Tustin, CA 92780

CEQA Consultant:

ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

3333 Michelson Drive, Suite 500
Irvine, CA 92612

February 2024

Contents

1 INTRODUCTION 1
1.1 Purpose of the Initial Study 1
1.2 Document Organization 1
2 ENVIRONMENTAL SETTING 3
2.1 Project Background 3
2.2 Project Location 3
2.3 Existing Project Site 4
2.4 Existing General Plan Land Use and Zoning Designations 4
2.5 Surrounding Land Uses 4
3 PROJECT DESCRIPTION 16
3.1 Project Overview 16
3.2 Project Features 16
3.3 Project Objectives 18
3.4 Discretionary Approvals and Permits 18
4 ENVIRONMENTAL CHECKLIST 22
4.1 Background 22
4.2 Environmental Factors Potentially Affected 22
4.3 Determination 23
4.4 Evaluation of Environmental Impacts 24
5 ENVIRONMENTAL ANALYSIS 25
5.1 Aesthetics 25
5.2 Agriculture and Forestry Resources 28
5.3 Air Quality 30
5.4 Biological Resources 31
5.5 Cultural Resources 34
5.6 Energy 37
5.7 Geology and Soils 38
5.8 Greenhouse Gas Emissions 44
5.9 Hazards and Hazardous Materials 45
5.10 Hydrology and Water Quality 49
5.11 Land Use and Planning 56
5.12 Mineral Resources 57
5.13 Noise 58
5.14 Population and Housing 59
5.15 Public Services 60
5.16 Recreation 61
5.17 Transportation 62
5.18 Tribal Cultural Resources 63
5.19 Utilities and Service Systems 64
5.20 Wildfire 65
5.21 Mandatory Findings of Significance 66
6 REFERENCES 68

Tables

Table 1-1: Surrounding Existing Land Use and Zoning Designations 4
Table 1-2: Existing and Proposed Project Site Characteristics 16

Figures

Figure 2-1: Regional Location 6
Figure 2-2: Local Vicinity 8
Figure 2-3: Aerial 10
Figure 2-4: Existing General Plan Land Use 12
Figure 2-5: Existing Zoning 14
Figure 3-1: Proposed Zoning 20

List of Appendices

Appendix A Cultural Record Search Results

Acronym List

A-P	Alquist-Priolo Earthquake Fault Zoning Act
AQMP	Air Quality Management Plan
AB	Assembly Bill
APN	Assessor's Parcel Numbers
BMPs	Best Management Practices
CARB	California Air Resources Board
CBC	California Building Code
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibel
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
GHG	Greenhouse Gas
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NPDES	National Pollutant Discharge Elimination System
NAHC	Native American Heritage Commission
NOx	Nitrous Oxides
O_3	Ozone
PM	Particulate Matter
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
SWPPP	Stormwater Pollution Prevention Plan
TPZ	Timberland Production Zone
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
WQMP	Water Quality Management Plan

1 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

This Initial Study has been prepared in accordance with the following:

- California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Sections 21000 et seq.); and
- Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines) (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 et seq.), as amended and approved on December 28, 2018.

Pursuant to CEQA, this Initial Study has been prepared to analyze the potential for significant impacts on the environment resulting from implementation of the proposed Project, described in greater detail in Section 3.0, *Project Description*. As required by State CEQA Guidelines Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the City of Tustin, to determine if a Mitigated Negative Declaration or an Environmental Impact Report is required to evaluate the potential environmental impacts associated with the Project.

This Initial Study informs the City of Tustin decision-makers, affected agencies, and the public of potentially significant environmental impacts associated with the implementation of the Project. A "significant effect" or "significant impact" on the environment means *"a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project"* (State CEQA Guidelines Section15382).

Given the Project's broad scope and level of detail, combined with previous analyses and current information about the site and environs, the City's intent is to adhere to the following CEQA principles:

- Provide meaningful early evaluation of site planning constraints, service and infrastructure requirements, and other local and regional environmental considerations (Public Resources Code Section 21003.1).
- Encourage the applicant to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time (State CEQA Guidelines Section 15004[b][3]).
- Specify mitigation measures for reasonably foreseeable significant environmental effects and commit the City to future measures containing performance standards to ensure their adequacy when detailed development plans and applications are submitted (State CEQA Guidelines Section 15126.4).

1.2 DOCUMENT ORGANIZATION

This Initial Study includes the following sections:

Section 1. Introduction

Provides information about CEQA and its requirements for environmental review and explains that an Initial Study was prepared to evaluate the proposed Project's potential impacts to the physical environment, and to determine if an Environmental Impact Report (EIR) is required.

Section 2. Environmental Setting

Provides information about the proposed Project's location.

Section 3. Project Description

Includes a description of the proposed Project's physical features and characteristics.

Section 4. Environmental Checklist

Includes the Environmental Checklist from Appendix G of the State CEQA Guidelines and identifies what subject areas were determined to be new significant environmental effects or previously identified effects that have a substantial increase in severity, based on the analysis in Section 5.

Section 5. Environmental Analysis

Evaluates the proposed Project's potential to result in significant adverse effects to the physical environment and identifies if an EIR is required, and what environmental topics need to be analyzed in the EIR if so.

2 ENVIRONMENTAL SETTING

2.1 PROJECT BACKGROUND

The City of Tustin prepared the 2021-2029 Housing Element Update of the General Plan in accordance with Government Code Section 65580 et seq. The City is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The update to the Housing Element covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029. The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA).

On October 5, 2021, the City Council adopted Resolution No. 21-86, certifying the Negative Declaration (ND) for GPA 2021-0002 (and Resolution No. 21-87, approving GPA 2021-0002), which analyzed environmental impacts related to the City's Draft Housing Element Update of the General Plan. The Draft Housing Element Update was prepared, as required by State Housing Element law. Following preparation of the Draft Housing Element Update and certification of the ND, the Draft Housing Element went through several rounds of revisions and submittal for review to the State Department of Housing and Community Development (HCD). The City received formal certification of the Housing Element Update from HCD on September 12, 2022. On October 4, 2022, the City Council adopted Resolution No. 22-47, approving General Plan Amendment 2022-0002 for the final Housing Element Update.

The 2021-2029 Housing Element includes several provisions that aim to ensure the City can meet the required "fair share" of affordable housing units, as specified by the State of California. During the Housing Element process, the City assessed a number of properties and areas throughout the community that would be able to accommodate the City's assigned 2021 Regional Housing Needs Allocation (RHNA). The City identified 19 sites and one housing category (accessory dwelling units [ADUs]/junior accessory dwelling units [JADUs]) as qualifying sites to accommodate their RHNA allocation. Of the 19 Housing Element inventory sites, Enderle Center (Housing Element Site 17) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development.

Enderle Center (the Project site) consists of approximately 11.80 acres of privately owned property. Currently, the Project site is developed with a commercial center. Of the site area, 7 acres within the southeastern portion of the Project site have been identified as suitable for housing development. These 7 acres are currently made up of paved parking areas. Based on the proposed overlay zone, redevelopment of 7 acres of the site would accommodate up to 413 housing units.

2.2 PROJECT LOCATION

The Project site is approximately 11.80 acres and is located within the City of Tustin. The City is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, SR 261 to the east, and the I-405 freeway to the south, as illustrated in Figure 2-1, *Regional Location*.

The Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by the 55 freeway, including properties west of Yorba Street. The Project site consists of Assessor Parcel Numbers (APNs) 401-251-04, -05, and -06; 401-252-05, -06, -08, -09, and -10; and 401-253-03 and -04.

The local vicinity of the Project site is illustrated in Figure 2-2, *Local Vicinity*.

2.3 EXISTING PROJECT SITE

The Enderle Center is currently developed with 87,136 SF of commercial business, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, 18,426 SF of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas. Figure 2-3, *Aerial*, illustrates the Project site in its current condition.

2.4 EXISTING GENERAL PLAN LAND USE AND ZONING DESIGNATIONS

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The PCCB land use designation provides opportunities for a variety of miscellaneous retail, professional office, and service-oriented business activities. The PC COM zoning is intended to allow diversification of the relationships of various buildings, structures and open spaces in planned building groups, while ensuring substantial compliance with the district regulations and other provisions of the Planned Community District zone.

The Project site's existing General Plan land use and zoning designations are shown in Figure 2-4, *Existing General Plan Land Use* and Figure 2-5, *Existing Zoning*.

2.5 SURROUNDING LAND USES

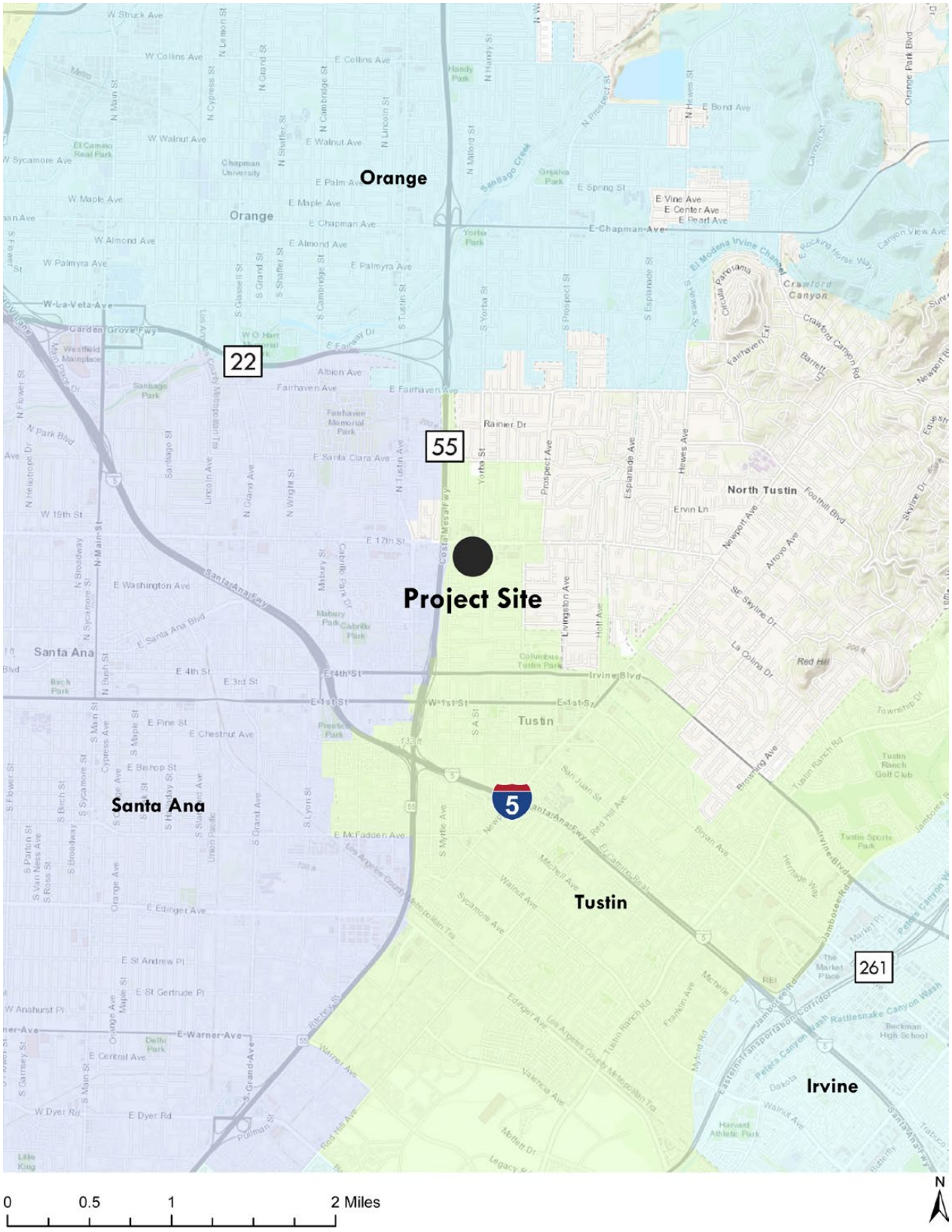
The Project site is located within a developed area. The surrounding land uses and their designations are described in Table 1-1.

Table 1-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
North	17th Street followed by commercial, residential and office uses	Community Commercial (CC), Planned Community Commercial/Business (PCCB)	Retail Commercial (C1) with Parking Overlay, Commercial General (CG), & Planned Community Commercial (PC COM)
East	Enderle Center Drive followed by office uses	Planned Community Commercial/Business (PCCB)	Planned Community Commercial (PC COM)
South	Vandenberg Lane followed by residential uses	Planned Community Residential (PCR)	Planned Community Residential (PC RES)
West	Tustin city limits and SR-55 freeway, followed by restaurants and office uses in the City of Santa Ana	Professional and Administrative Office (PAO) & General Commercial (GC) (*City of Santa Ana*)	Professional (P) & Community Commercial (C1) (*City of Santa Ana*)

This page intentionally left blank.

Regional Location

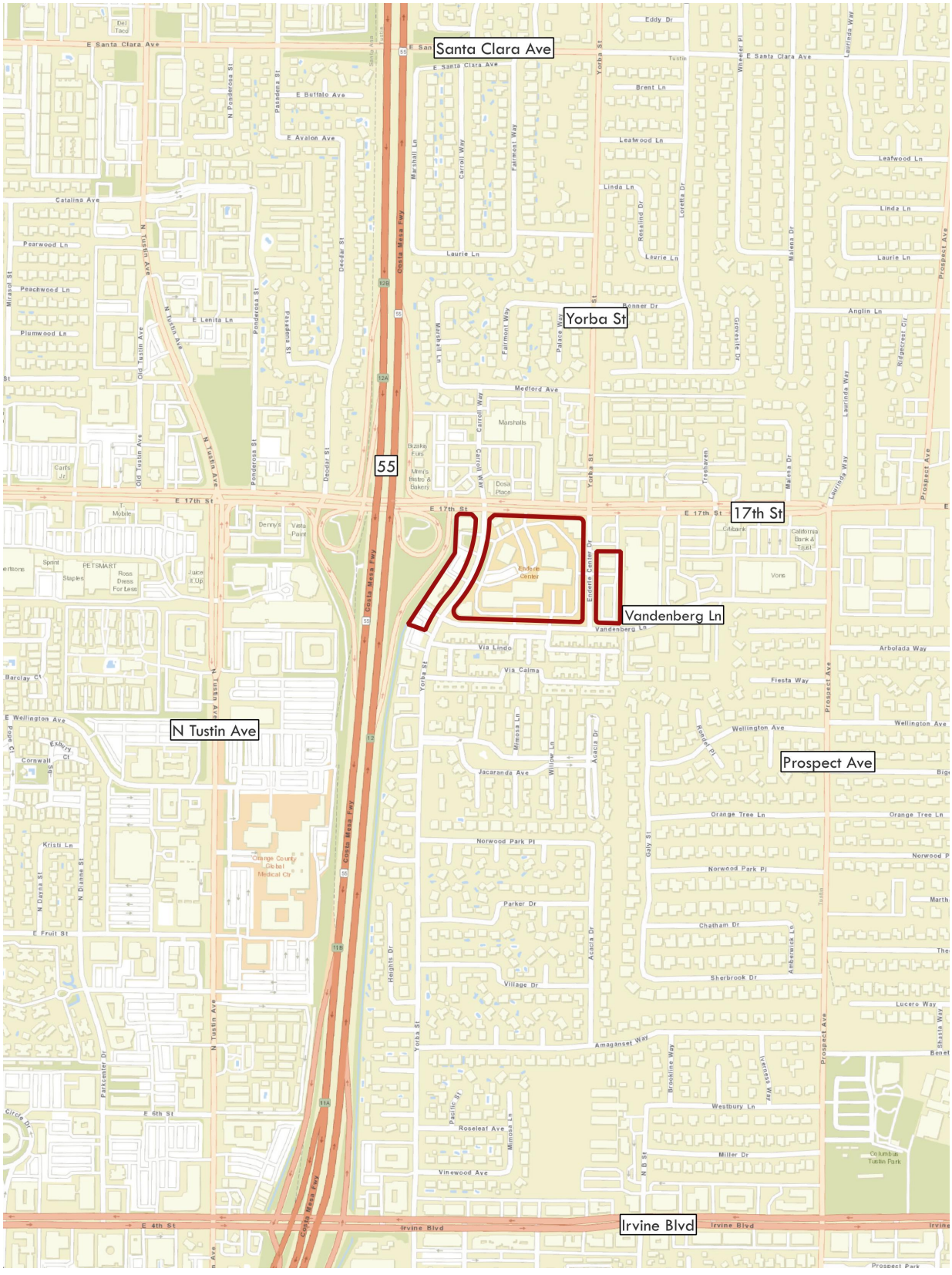


Enderle Center Rezone Project
City of Tustin

Figure 2-1

This page intentionally left blank.

Local Vicinity



Enderle Center Rezone Project
City of Tustin

Figure 2-2

This page intentionally left blank.

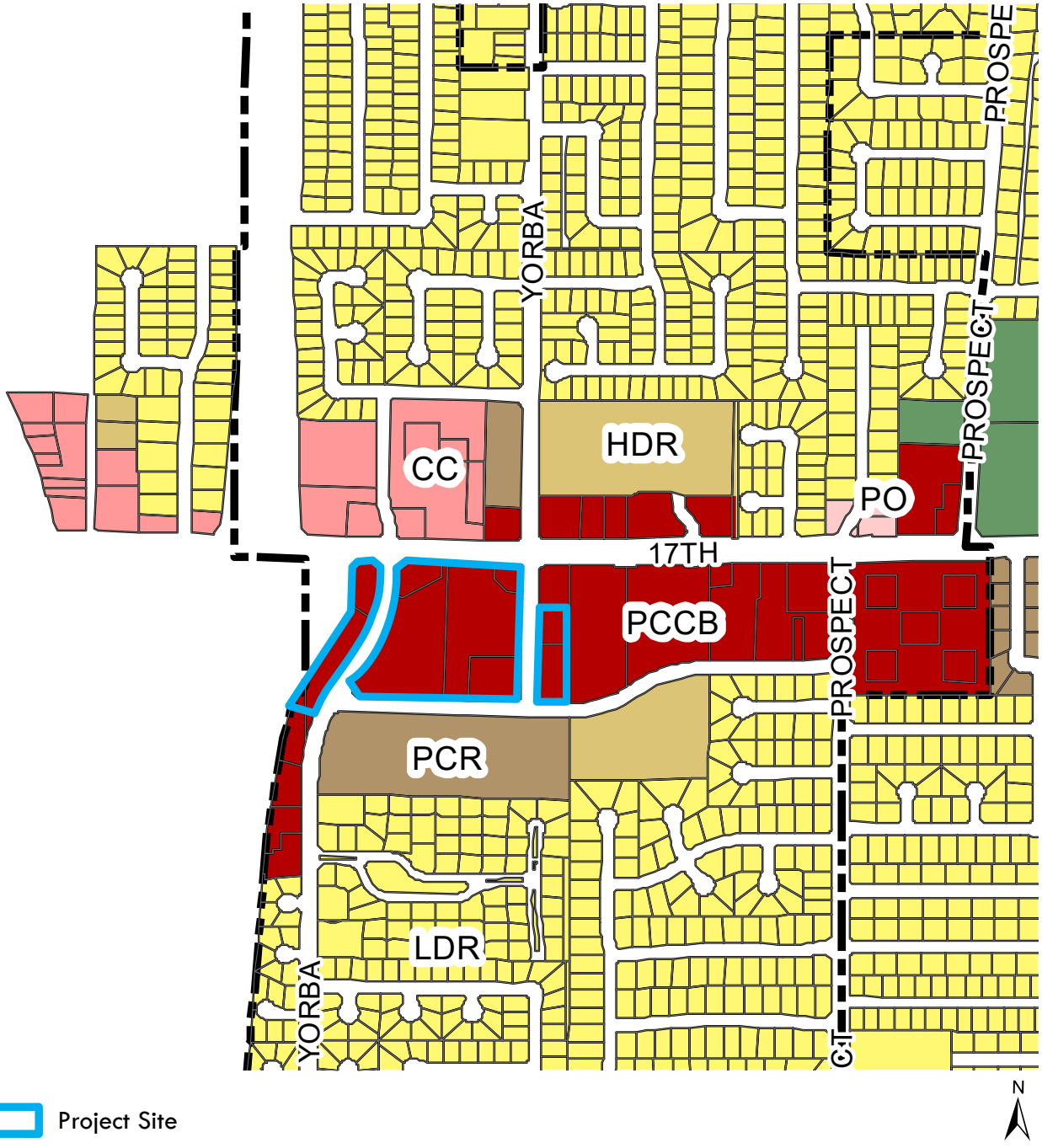
Aerial View

Enderle Center Housing Overlay
City of Tustin

Figure 2-3

This page intentionally left blank.

Existing General Plan Land Use Designation



Project Site

PCCB - Planned Community Commercial/Business

CC - Community Commercial

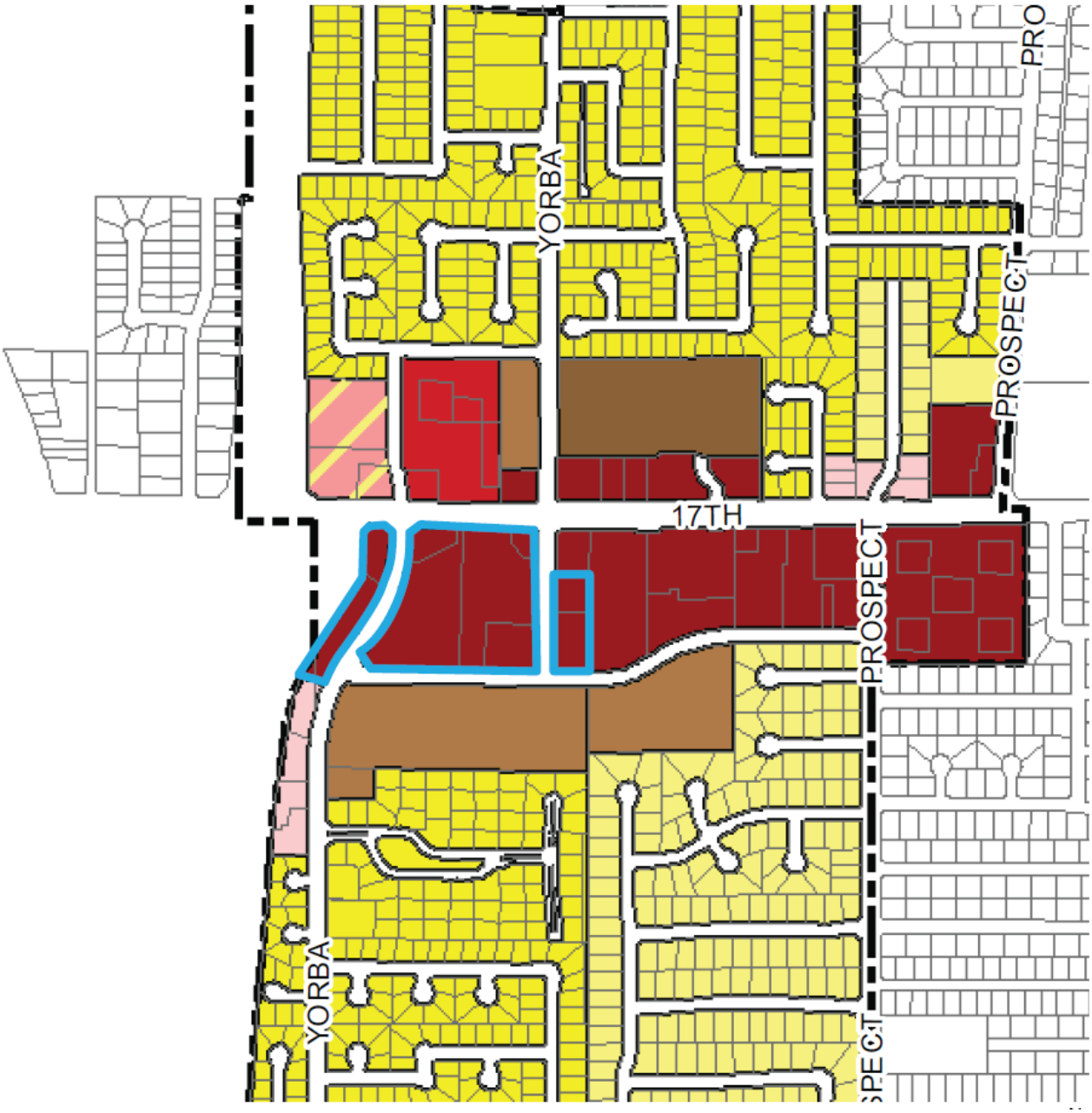
PCR - Planned Community Residential

HDR - High Density Residential

LDR - Low Density Residential

This page intentionally left blank.

Existing Zoning



Project Site

- R1 - Single Family Residential
- R2 - Duplex Residential
- R3 - Multiple Family Residential
- R4 - Suburban Residential
- PC RES - Planned Community Residential
- PD - Planned Development
- MHP - Mobile Home Park
- PR - Professional
- C1 - Retail Commercial
- C2 - Central Commercial
- CG - Commercial General
- PC COM - Planned Community Commercial
- PM - Planned Industrial
- M - Industrial
- PC IND - Planned Community Industrial
- PI - Public and Institutional
- PCPI - Planned Community Public and Institutional

This page intentionally left blank.

3 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

Pursuant to Housing Element Program 1.1f, the City is proposing an overlay zone ("overlay district") for the project site. To accommodate this, a General Plan Amendment (GPA) is needed to establish that higher density residential uses are allowed in the Planned Community Commercial Business Designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP); a Zoning Code Amendment (CA) to establish a Housing Overlay zoning district (overlay zone) and associated criteria, which will be applied in conjunction with the Planned Community Commercial District (base zone); and a Zone Change (ZC) that amends the City's zoning map to apply a Housing Overlay (HO) district to the project site. The proposed HO district would allow residential development of 413 dwelling units over a maximum area of seven (7) acres.

The proposed project is consistent with the City's adopted Housing Element, which identified the Enderle Center as having capacity for 413 housing units on seven acres of the existing Center's parking lots (equating to 59 dwelling units per acre). The anticipated development density was determined through the Housing Element process and is a conservative estimate based on development trends in nearby communities. The anticipated development does not rely on the demolition of any existing building, but rather focuses on areas used for surface parking. No development is proposed as part of this Project, but this Draft EIR has analyzed all known anticipated impacts of the development of the proposed housing units. Table 1-2 lists the existing and proposed Project site land use regulation characteristics.

Table 1-2: Existing and Proposed Project Site Characteristics

	Existing			Proposed			
	GP Land Use	**Zoning Designation**	**Maximum Allowable Units**	**GP Land Use**	**Zoning Designation**	**Maximum Residential Acreage**	**Maximum Allowable Units**
Enderle Center	PCCB	PC COM	0	PCCB	PC COM & HO	7	413

3.2 PROJECT FEATURES

Proposed Housing Overlay District

During the Housing Element process, the City identified the Enderle Center as a suitable commercial site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. This would be accomplished with a "housing overlay" zone.

The housing overlay zone would allow residential land uses in addition to the uses allowed under the existing PC COM zoning. Thus, the Housing Overlay (HO) district would be added "on top" of the existing PC COM zone (i.e., Base Zone). The overlay zone would also provide development standards related to parking, height, noise, and other criteria applicable to residential uses. The HO district text will include a provision that the HO district supersedes the development standards and allowed uses listed within the Base Zone.

Residential uses are currently not allowed on the Project site. Upon approval of the Housing Overlay (HO) district, the Project site could accommodate 413 units on approximately 7 acres of developable land within the existing 11.8-acre site. This could result in a density of 59 dwelling units per acre (du/ac). The anticipated development over 7 acres may take place on underutilized asphalt parking lot areas and does not require

demolition of existing buildings. Parking displaced as a result of redevelopment would be accommodated by vertical parking structures located within the Project site.

Proposed General Plan Amendment

As described in Section 2, *Environmental Setting*, the Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB). The PCCB designation is part of the City's General Plan Planned Community (PC) designations and is intended to provide for a mix of commercial and office uses such as hotel/motels, commercial centers, research and development, and professional offices. The Planned Community Commercial designation may also permit other uses that support this land use designation, such as residential uses. The overall population density range for residential uses within the PCCB designation is 2 to 54 persons per acre. The proposed General Plan Amendment (GPA) via text will establish that a higher density of residential uses are allowed in the PCCB designation subject to limits contained within a Housing Overlay (HO) district (zoning) or as allowed by a specific plan.

Proposed Zone Code Amendment

The Project includes an amendment to Tustin City Code (TCC), Article 9 (Land Use), Chapter 2 (Zoning), Part 5, to establish a Housing Overlay (HO) district, which allows for high density residential development, and stipulates that objective development standards and design guidelines will apply to properties within the boundary of the Housing Overlay (HO) district.

Proposed Zone Change

The Project also includes an amendment to the City's Zoning Map to add the newly codified Housing Overlay (HO) district on top of the site's existing PC COM zoning. Figure 3-1, *Proposed Zoning,* illustrates the proposed zone change.

Nonresidential Buildout

The Project site is envisioned to function as a mixed-use site, with a portion of the Project site maintaining nonresidential land uses. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB). The General Plan PCCB designation allows for development of a Floor Area Ratio (FAR) up to 1.5:1 (one-and-a-half to one). However, the General Plan assumes the average site to develop up to an FAR of 0.4:1. Based on the General Plan development assumption, the Project site is assumed to be developed with 205,603 SF of nonresidential uses.

The Enderle Center is currently developed with 87,136 SF of commercial businesses, including 28,750 SF of restaurant use, 39,960 SF of retail and service use, and 18,426 SF of office use. Therefore, the total remaining nonresidential use assumed for future buildout of the Project site is 118,467 SF.

Therefore, the Project anticipates the additional development of nonresidential uses of 118,467 SF in the future, for a total nonresidential development capacity of 205,603 SF on the Project site, pursuant to the General Plan. Future nonresidential projects proposed that are within the remaining development capacity of the site would be required to comply with the existing PCCB development standards and the City's plan review process. Future nonresidential development is anticipated to be developed within exiting undeveloped areas, and the Project does not assume demolition of existing structures. A specific development project is not proposed as part of this Project.

Housing Element Programs Applicable to the Project Site

The 2021-2029 Housing Element included several housing programs to be implemented during the 2021-2029 planning period. The discussion below outlines three programs that are applicable to the proposed Project.

Program 1.2a

Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in TCC Section 9272 (Design Review) and adopt new Objective Design Standards (ODS) to ensure that the City can provide clear guidance regarding project design, in order to streamline the development of high-quality residential development. The ODS would include provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a is anticipated to be complete in October 2024.

Program 1.2c

Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development, and allowance of parking structures and parking lifts, by right and subject to the ODS.

Infrastructure Improvements

Roadways and utilities may be required to support development of future residential construction within the Project site. Future onsite infrastructure improvements that may be necessary for residential development within the Enderle Center include storm drains, wastewater, water, and dry utilities that would connect to existing facilities within the Project site or adjacent to the Project area. Specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed.

3.3 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (14 California Code of Regulations [CCR]) requires "A statement of objectives sought by the proposed project. A clearly written statement of objectives would help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and would aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project." The primary purpose and goal of the Project is to accommodate the City's 6th Cycle RHNA identified within the City of Tustin 2021-2029 Housing Element. The Project would achieve this goal through the following objectives:

- Creation of a Housing Overlay (HO) district to allow residential development at densities which achieve the estimated capacities determined in the Housing Element, and without inhibitors to residential development.
- Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.
- Increase flexibility in allowed uses and development potential within an underutilized area of the City of Tustin.
- Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

3.4 DISCRETIONARY APPROVALS AND PERMITS

Preparation of an EIR is anticipated for the Project. The City of Tustin has primary approval responsibility for the Project. As such, the City serves as the Lead Agency for the EIR pursuant to CEQA Guidelines §15050. The Tustin Planning Commission will evaluate the EIR and the Project and make a recommendation to the City Council as to whether the Project should be approved and the EIR certified. The City Council is the decision-making authority for the Project, and therefore will consider the Project along with the Planning Commission's

recommendations, and make a final decision to approve, approve with changes, or deny the Project. The City, including the Planning Commission and the City Council, will consider the information in the EIR and the Project's administrative record in its decision-making processes. In the event that the Council certifies the EIR and approves the Project, the City would subsequently conduct administrative and discretionary review of development proposals and grant ministerial and discretionary permits and approvals that implement Project requirements, conditions of approval, and future development within the Enderle Center.

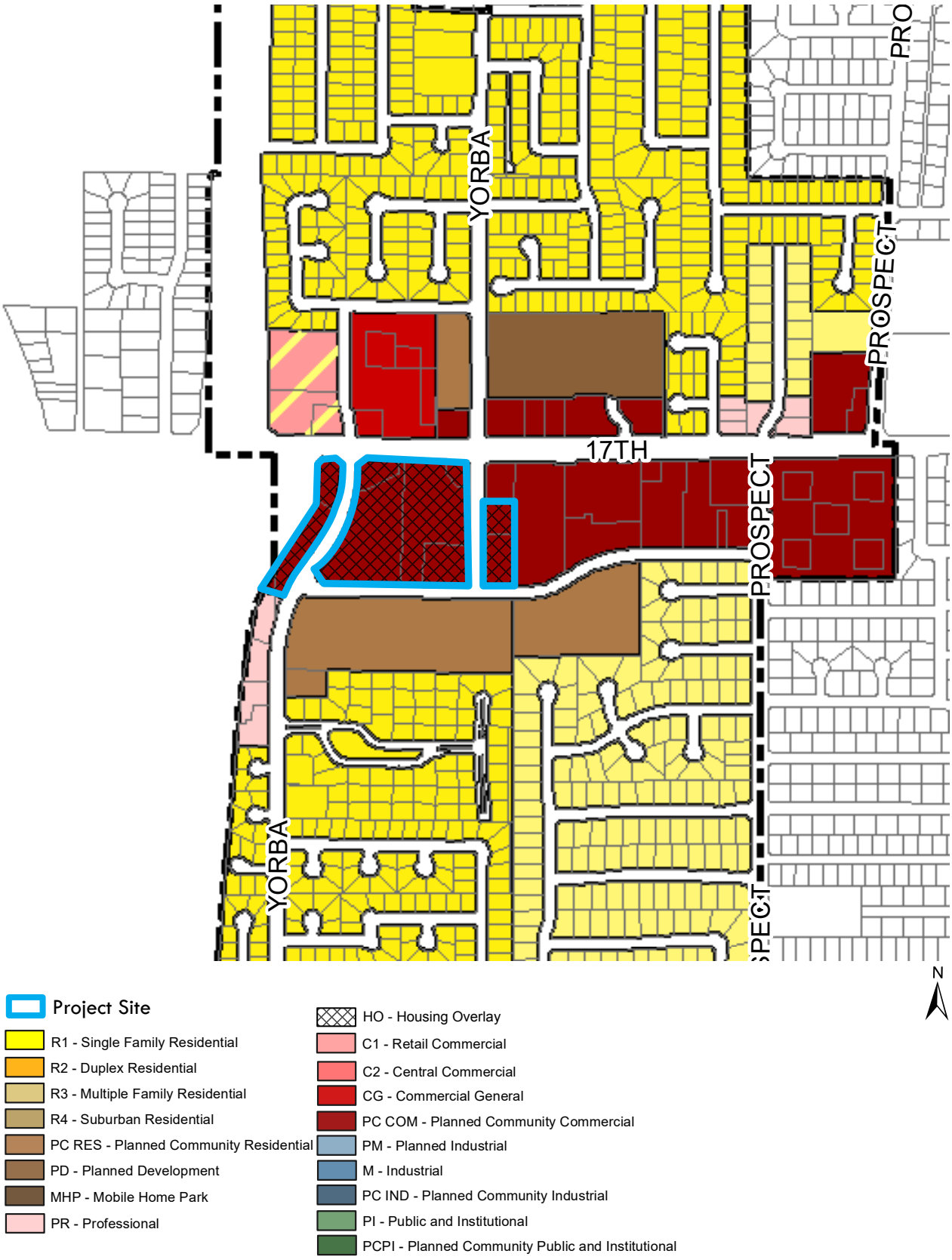
Approval and implementation of the Housing Overlay (HO) district requires City approval of the following discretionary actions:

- Certification of the EIR;
- Adoption of the GPA to allow higher density residential uses within Planned Community Commercial/Business land use designations, subject to residential densities and development restrictions established by a Housing Overlay (HO) district or specific plan;
- Adoption of a Zoning Code Amendment (CA) to establish the zoning, development regulations, guidelines, and implementation provisions governing development of the Housing Overlay District.
- Adoption of a Zone Change (ZC) to modify the City's Zoning Map to add the Housing Overlay (HO) district over the site's existing PC COM zoning; and
- Approval of a Housing Overlay (HO) district for the 11.8-acre Project site, authorizing 413 dwelling units on 7 (seven) acres.

The EIR may be used by various governmental decisionmakers for discretionary permits and actions that are necessary or may be requested in connection with implementation of future development projects pursuant to the Project. Additional discretionary, administrative, and/or ministerial actions may be necessary from other responsible agencies to fully implement the Project. The state or local agencies that may rely upon the information contained in the EIR, when considering approval of permits, may include the following:

- Tustin Unified School District.

Proposed Zoning



This page intentionally left blank.

4 ENVIRONMENTAL CHECKLIST

4.1 BACKGROUND

Project Title: Enderle Center Rezone Project
Lead Agency: City of Tustin
Lead Agency Contact: Samantha Brier, Senior Planner
Project Location: 17350 17th St, Tustin, CA 92780
Project Sponsor's Name and Address: City of Tustin, 300 Centennial Way, Tustin, CA 92780
Existing General Plan and Zoning Designation: The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) as shown in Figure 2-4, *Existing General Plan Land Use;* and a zoning designation of Planned Community Commercial (PC COM) as shown in Figure 2-5*, Existing Zoning*.
Project Description: Pursuant to Housing Element Program 1.1f, the City is proposing a GPA, CA, ZC, and Housing Overlay (HO) zone to allow residential development within the Enderle Center. The Housing Element identified the Enderle Center as having capacity for 413 housing units. The anticipated development density was determined through the Housing Element process and is a conservative estimate based on development trends in nearby communities. The anticipated development does not rely on the demolition of any existing buildings, but rather focuses on areas used for surface parking.
Surrounding Land Uses and Setting: North: 17th Street followed by commercial, residential, and office uses. East: Enderle Center Drive followed by a fast-food restaurant and office uses. South: Vandenberg Lane followed by residential uses. West: City limits and the SR-55 Freeway.
Other Public Agencies Whose Approval is Required: None.

4.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The subject areas checked below were determined to be new significant environmental effects or to be previously identified effects that have a substantial increase in severity either due to a change in project, change in circumstances or new information of substantial importance, as indicated by the checklist and discussion on the following pages.

☐	Aesthetics	☐	Agriculture/Forestry Resources	☒	Air Quality
☐	Biological Resources	☐	Cultural Resources	☒	Energy
☐	Geology/Soils	☒	Greenhouse Gas Emissions	☐	Hazards/Hazardous Materials
☒	Hydrology/Water Quality	☒	Land Use/Planning	☐	Mineral Resources
☒	Noise	☒	Population/Housing	☒	Public Services
☒	Recreation	☒	Transportation	☒	Tribal Cultural Resources
☒	Utilities and Service Systems	☐	Wildfire	☒	Mandatory Findings of Significances

4.3 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARACTION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☒ I find that the proposed project MAY have a "potentially significant" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier analysis pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Name and Title	Lead Agency

4.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including offsite as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross-referenced).

5. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Guidelines Section 15063 (c)(3)(d). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

5 ENVIRONMENTAL ANALYSIS

This section provides evidence to substantiate the conclusions in the environmental checklist.

5.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a) Have a substantial adverse effect on a scenic vista?

No Impact. Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting. A scenic vista can be impacted in two ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or "vista" of the scenic resource. Important factors in determining whether a proposed project would block scenic vistas include the project's proposed height, mass, and location relative to surrounding land uses and travel corridors.

The City of Tustin General Plan designates landforms and visual interest points as scenic resources within the Conservation Element (City of Tustin, 2018). The City of Tustin protects public views along the ridge lines, views toward the inland mountains and along scenic transportation corridors. Specifically, Policy 35, *Protect Scenic Views and Resources*, protects views of the Peter Canyon Ridgeline:

> **Policy 35. Protect Scenic Views and Resources:** Through the Hillside Review process, monitor and limit development of Peters Canyon Ridgeline consistent with the requirements of the East Tustin Specific Plan, Grading and Excavation Code and Grading Manual.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The view of Peters Canyon Ridgeline from the Project site is obstructed by surrounding buildings and trees. The Project site is bordered by 17th Street to the north, which offers limited public views of Peters Canyon Ridgeline to motorists, bicyclists, and pedestrians traveling eastbound. Views to the east from CA-55 are completely obstructed by adjacent developments and the raised embankment.

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. Future residential development would be constructed within the boundaries of the existing Enderle Center site and would not impede any existing views of Peters Canyon Ridgeline from 17th Street. The provision for residential development in an area formerly designated for nonresidential land uses would not further diminish views of a scenic vista. Therefore, the Project would result in no impact.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. According to the California Department of Transportation (Caltrans) Scenic Highway Map, the City of Tustin does not contain any scenic highways within or surrounding the City (California Department of Transportation, 2018). The nearest state scenic highway is Route 91 in the City of Orange, approximately 8.5 miles to the north. According to the County of Orange General Plan, there are no designated scenic roadways or scenic vistas in the Project vicinity (County of Orange, 2005). Therefore, the Project would have no impact on scenic resources within a state scenic highway.

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). Or if the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project site is bordered to the north by 17th Street, followed by commercial, residential and office uses; to the east by Enderle Center Drive, followed by office uses; to the south by South Vandenberg Lane, followed by residential uses; and to the west by Tustin city limits and SR-55 freeway, followed by restaurants and office uses in the City of Santa Ana (see Table 1-1). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element.

Per Housing Element Program 1.2a, the City will develop objective development standards (ODS) to ensure high quality residential development, while simultaneously meeting the City's goal of streamlining residential development to meet its RHNA goals. Development is not proposed as part of the Project; however, all future residential development proposed within the Project site would be subject to the requirement and provisions of the applicable ODS. Commercial development within the Enderle Center does not currently have a maximum height limit or required setback distances, and site design is evaluated on a project-by-project basis due to the properties designation as Planned Community Commercial (PC COM). Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. The ODS would ensure high visual character and quality of future residential development proposed within the Project site. All future development would be required to comply with the City's ODS for the site. Therefore, the Project would not conflict with applicable zoning and other regulations governing scenic quality and would have a less than significant impact on visual character and quality.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. Spill light occurs when lighting fixtures, such as streetlights, parking lot lighting, exterior building lighting, and landscape lighting, are not properly aimed or shielded to direct light to the desired location, and light escapes and partially illuminates a surrounding location. Sensitive uses (e.g., residential uses) surrounding the Project site could be impacted by the light from development within the boundaries of the Project site if light spill occurs.

Glare is the result of improperly aimed or blocked lighting sources that are visible against a dark background, such as the night sky. Glare may also refer to the sensation experienced looking into an excessively bright light source that causes a reduction in the ability to see or causes discomfort. Glare generally does not result in illumination of off-site locations but results in a visible source of light viewable from a distance. Glare could also occur from building materials of the new structures, including glass and other reflective materials.

The City of Tustin Municipal Code, Section 9271hh, *Light and Glare*, includes the following requirements:

> All exterior lighting shall be subject to the following standards, unless otherwise exempted by the City of Tustin:
>
> (a) Outdoor lighting shall be designed to minimize impacts from light pollution, including light trespass and glare to minimize conflict caused by unnecessary illumination.
>
> (b) Outdoor lighting fixtures that are used to illuminate a premises, architectural features or landscape feature on private property shall be directed, shielded, or located in such a manner that the light source is not directed off-site.

The Project does not propose development but would allow for the future development of residential land uses within an existing commercial land use. Future development could add additional nighttime light sources, such as landscape lighting, security lighting, and the lighting from additional cars. As previously discussed, all future projects would be required to comply with the applicable ODS for the site. The ODS would include specific setbacks, lighting standards, and building materials that would ensure the avoidance of potential lighting impacts. Further, all future projects would be required to comply with the City's light and glare ordinance, which would be verified through plan check prior to project approval. Therefore, the Project would result in a less than significant impact.

5.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The State of California Department of Conservation's Farmland Mapping and Monitoring Program is charged with producing maps for analyzing impacts on the state's agricultural resources. California's agricultural lands are rated based on soil quality and irrigation status. Per Section 21060.1 of the State CEQA Guidelines, the following categories qualify as "agricultural land": Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.

Per the CDOC FMMP Map, the Project site is designated as Urban and Built-Up Land (California Department of Conservation, 2018). Further, the City does not currently include any commercial agricultural land uses. Existing zoning categories within the City of Tustin do not allow for commercial agricultural uses. Therefore, the Project would result in no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Williamson Act (California Land Conservation Act of 1965) restricts the use of agricultural and open space lands to farming and ranching by enabling local governments to contract with private landowners for indefinite terms in exchange for reduced property tax assessments.

The Project site is currently developed with commercial land uses and does not include agricultural land uses. The Project site is not currently under a Williamson Act contract. Therefore, the Project would result in no impact on existing zoning for agricultural use or a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. "Forest land" is defined as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." "Timberland" is defined as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees." "Timberland Production Zone" (TPZ) is defined as "an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h)."

The Project site is currently completely developed with commercial land use. The Project site does not include forest land or timberland. Additionally, the Project site is currently zoned for Planned Community Commercial (PC COM), which does not provide for forest land or timberland production and management. Therefore, the Project would result in no impact on zoning of forest land or timberland.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As discussed above, the Project site is currently completely developed as commercial land use and does not include forest land. Therefore, the Project would have no impact on forest land.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The Project site is within an urbanized area and is currently completely developed as commercial land use. The area surrounding the Project site is also completely developed. The existing environment does not include any agricultural land uses or forest land.

5.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

a) through d)

Potentially Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The provision of development intensification could facilitate future operational air quality impacts. Residential land uses have not been previously analyzed through applicable air quality plans. The addition of residential land uses could result in a cumulatively considerable net increase of criteria pollutants within the study area. Additionally, the introduction of new land uses to existing development could expose sensitive receptors to substantial pollutant concentrations. Therefore, an air quality study will be conducted for the Project to determine potential impacts and air quality impacts will be further analyzed within the EIR.

5.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Wildlife or U.S. Fish and Wildlife Service?

No Impact. The Project site consists of approximately 11.8 acres that are developed with existing commercial uses, including restaurant, retail, and office establishments, a paved parking lot, and landscaping. The area identified in the City's adopted Housing Element as most likely for future residential development is 7 acres of existing parking lot area within the southeast portion of the Project site. The Project site is surrounded by urban developed areas with structures, paved parking, and ornamental landscaping. There is no evidence of either suitable habitat for or the presence of any endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS).

The Project does not propose development; however, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element. Landscaping implemented as part of future projects would likely include a variety of ornamental trees, shrubs, and groundcover. As the Project site is currently completely paved, implementation of the

Project would not result in an adverse effect, either directly or through habitat modifications, on any sensitive species, and impacts would not occur.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. As discussed above, the area proposed for the provision of future residential development is completely paved with a parking lot. There is no existing riparian habitat or sensitive natural community within the developable area of the site. Therefore, the Project would result in no impact.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. As discussed above, the area proposed for the provision of future residential development is completely paved with a parking lot. There are no wetlands or riparian areas within the developable area of the site. Therefore, the Project would result in no impact.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact with Mitigation. Wildlife corridors are areas where wildlife movement is concentrated due to natural or anthropogenic constraints and corridors provide access to resources such as food, water, and shelter. Animals use these corridors to move between different habitats and provide avenues for wildlife dispersal, migration, and contact between other populations.

The Project site does not support conditions for migratory wildlife corridors or linkages. The Project site is completely developed and surrounded by a roadway and developed land uses. The site and surrounding areas do not provide function for wildlife movement. Additionally, the surrounding area is developed and urban. There are no rivers, creeks, or open drainages near the site that could function as a wildlife corridor. Thus, implementation of the Project would not result in impacts related to wildlife movement or wildlife corridors.

However, the Project site contains existing ornamental trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibit disturbing or destroying active nests. Therefore, Mitigation Measure BIO-1 has been included to require that if commencement of vegetation clearing for any future residential development project occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. With implementation of Mitigation Measure BIO-1, potential impacts to nesting birds would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources?

Less Than Significant Impact. The Project site is urban and developed and contains no biological resources to be preserved under the resource protection policies of the City's General Plan. Article 7, Chapter 3 of the Municipal Code addresses the protection of "trees, plants or shrubs in or growing upon or over any public parkway street, highway, alley, right-of-way, City-owned property in the City." The Project would not impact any such trees and shrubs. To the extent that future development facilitated by the Project is required to plant new trees on public property pursuant to Section 7308 of Article 7, Chapter 3, the Project would be

required to comply with the Municipal Code requirements as part of the City permitting process (PPP BIO-1). As a result, impacts would be less than significant.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The Project site is developed and in an urban area. The Project site does not contain any natural lands that are subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project would not result in impacts to biological habitat or conservation plans.

Plans, Programs, or Policies (PPP)

PPP BIO-1 **Street Trees.** Installation of street trees shall occur in compliance with the City of Tustin Municipal Code Article 7, Chapter 3, Section 7308.

Mitigation Measures

MM BIO-1 **Migratory Bird Treaty Act.** Prior to commencement of grading activities, the City Building Division shall verify that, in the event that vegetation and tree removal activities occur within the active breeding season for birds (February 1–September 15), the Project applicant (or their Construction Contractor) shall retain a qualified biologist (meaning a professional biologist that is familiar with local birds and their nesting behaviors) to conduct a nesting bird survey no more than 3 days prior to commencement of construction activities.

The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by Project-related construction activities, such as noise, human activity, and dust, etc. If active nesting of birds is observed within 100 feet of the designated construction area prior to construction, the qualified biologist shall establish an appropriate buffer around the active nests (e.g., as much as 500 feet for raptors and 300 feet for non-raptors [subject to the recommendations of the qualified biologist]), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

5.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

A Cultural Records Search (see Appendix A) was prepared by Brian F. Smith and Associates Environmental Services (BFSA) for the Project to determine the potential for historic and architectural resources to occur within the Project site and has been incorporated into the discussion below (BFSA Environmental Services, 2023).

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact. State CEQA Guidelines Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered "historically significant" if it meets one of the following criteria:

i. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
ii. Is associated with the lives of persons important in our past;
iii. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
iv. Has yielded, or may be likely to yield, information important in prehistory or history.

According to results of the cultural record search prepared for the Project, the Project site does not contain any historic resources. Additionally, the area proposed for future implementation of residential land uses pursuant to the Housing Element is the existing parking lot, which does not contain any structures that could become historic in the future. Therefore, the Project would result in no impact to a historical resource.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact with Mitigation. According to results of the cultural record search prepared for the Project, the Project site does not contain any archaeological resources. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. Therefore, the Project site is heavily disturbed and does not currently contain any native undisturbed soils. However, the Project could facilitate future construction at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. Therefore, there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. In the event of an inadvertent discovery of a buried archeological resource, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource", and if the discovered resource(s) appears

Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist.

The City has detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential archaeological resources in the unlikely event that a resource is encountered. Therefore, the Project would result in a less than significant impact with mitigation on archeological resources.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. The Project site has been previously disturbed, as described above, and has not been previously used as a cemetery. Thus, human remains are not anticipated to be uncovered during project construction. In addition, California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 (included as PPP CUL-1) mandate the process to be followed in the event of an accidental discovery of any human remains. Specifically, California Health and Safety Code Section 7050.5 requires that if human remains are discovered, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of death, and made recommendations concerning the treatment and disposition of the human remains to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with existing law would ensure that significant impacts to human remains would not occur through the implementation of future construction facilitated by the Project.

Plans, Policies, and Programs (PPP)

PPP CUL-1 **Human Remains.** In the event that human remains are encountered on the Project site, work within 50 feet of the discovery shall cease and the County Coroner shall be notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. Prior to the issuance of grading permits, the City Community Department Director, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

Mitigation Measures (MM)

MM CUL-1 **Inadvertent Discovery.** In the event that potential archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological

resource," as defined in Section 21083.2(g) of the California Public Resources Code. Any resources identified shall be treated in accordance with California Public Resources Code Section 21083.2(g).

If the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. The discovery would also be reported to the City and the South Central Coastal Information Center (SCCIC).

Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist as specified above.

5.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

a) and b)

Potentially Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The provision of development intensification could facilitate future energy impacts. Residential land uses have not been previously analyzed for consistency with state or local energy plans and policies. Additionally, the future construction and operation of potential development could result in a substantial increase in energy consumption. Therefore, an energy study will be conducted for the Project to determine potential impacts and energy impacts will be further analyzed within the EIR.

5.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Less Than Significant Impact. In 1972, the Alquist-Priolo Special Studies Zones Act was signed into law. In 1994, it was renamed the Alquist-Priolo Earthquake Fault Zoning Act (A-P Act). The primary purpose of the Act is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The A-P Act requires the State Geologist (Chief of the California Geology Survey) to delineate "Earthquake Fault Zones" along with faults that are "sufficiently active" and "well-defined." The boundary of an "Earthquake Fault Zone" is generally about 500 feet from major active faults and 200 to 300 feet from well-defined minor faults. The A-P Act dictates that cities and counties withhold development permits for sites within an Alquist-Priolo Earthquake Fault Zone until geologic investigations demonstrate that the site zones are not threatened by surface displacements from future faulting.

The Project site is located in the northwest corner of the City of Tustin. According to the California Geological Survey available fault maps, the Project is approximately 10 miles to the south of the nearest A-P fault, Whitter Fault (Parrish, Earthquake Zones of Required Investigation, Yorba Linda Quadrangle, 2015). The Project is also approximately 11 miles to the north of the North Branch Fault (Parrish, Earthquake Zones of Required Investigation, Seal Beach Quadrangle, 1999). Due to the location of these faults, the general region is subject to the potential for earthquakes; however, the Project site is outside of a 500-foot radius from an active fault and is not subject to a special development permit. The Project site contains existing development, and the provision for additional development would not exacerbate existing risk of earthquake. Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Therefore, the Project would result in a less than significant impact.

ii. Strong seismic ground shaking?

Less Than Significant Impact. The Project site is located within a seismically active region of Southern California. As mentioned previously, the Whitter Fault is located 10 miles from the site (Parrish, Earthquake Zones of Required Investigation, Yorba Linda Quadrangle, 2015). Thus, moderate to strong ground shaking can be expected at the Project site. The amount of motion expected at the Project site can vary from none to forceful depending upon the distance to the fault and the magnitude of the earthquake. Greater movement can be expected at sites located closer to an earthquake epicenter, which consists of poorly consolidated material such as alluvium, and in response to an earthquake of great magnitude.

Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process (PPP GEO-1). Because the proposed Project would be constructed in compliance with the CBC, the proposed Project would result in a less-than-significant impact related to strong seismic ground shaking.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact with Mitigation. Soil liquefaction is a phenomenon in which saturated, cohesionless soils layers, located within approximately 50 feet of the ground surface, lose strength due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. During the loss of stress, the soil acquires "mobility" sufficient to permit both horizontal and vertical movements. Soil properties and soil conditions such as type, age, texture, color, and consistency, along with historical depths to ground water are used to identify, characterize, and correlate liquefaction susceptible soils.

Soils that are most susceptible to liquefaction are clean, loose, saturated, and uniformly graded fine-grained sands that lie below the groundwater table within approximately 50 feet below ground surface. Lateral spreading is a form of seismic ground failure due to liquefaction in a subsurface layer.

According to the California Geological Survey available fault maps, the Project is approximately 1.25 miles from the nearest liquefaction zone in the City of Orange (Parrish, Earthquake Zones of Required Investigation, Orange Quadrangle, 1998). The southern portion of Tustin is also identified as partially within a liquefaction zone. Additionally, all future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). The Project

site is outside of a liquefaction zone and would be required to conduct project-specific geotechnical investigations at the time that the project is proposed; therefore, the Project would result in a less-than-significant impact with mitigation.

iv. Landslides?

No Impact. Landslides and other slope failures are secondary seismic effects that are common during or soon after earthquakes. Areas that are most susceptible to earthquake induced landslides are steep slopes underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits.

The Project site is currently fully developed with commercial and office uses. The Project site is flat and is not adjacent to or within the vicinity of steep slopes or other landforms susceptible to landslides. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The provision of future residential development would not result in new risk of loss, injury, or death involving a landslide. Therefore, the Project would result in no impact.

b) Result in soil erosion or the loss of topsoil?

Less Than Significant Impact. The Project site is currently fully developed with commercial and office uses. However, future development facilitated by the provision of residential land uses within the Project site could result in ground disturbing activities as part of the construction.

All proposed development construction would be required to comply with the California Regional Water Quality Control Board (RWQCB) Order No. R8-2010-0033, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618033 – Construction General Permit requirements (PPP HYD-1). Requirements include installation of Best Management Practices (BMPs), which establishes minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by the RWQCB regulations to be developed by a QSD (Qualified SWPPP Developer). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures (PPP HYD-2). The City of Tustin Grading Manual is a compilation of rules, procedures, and interpretations necessary to carry out the provisions of the Tustin City Code relating to grading and excavation.

Following construction, future development would be required to prepare and implement a Water Quality Management Plan (WQMP) per City standards. Future projects would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP:

- Provides the framework for the program management activities and plan development;
- Provides the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensures that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues; and

- Ensures that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects develop and implement a water quality management plan (WQMP) that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. These requirements would ensure that future projects would not result in substantial soil erosion or the loss of topsoil. With implementation of uniformly applicable requirements (SWPPP, City of Tustin Grading Manual, and the DAMP), the Project would result in a less-than-significant impact.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact with Mitigation. Landslides and other forms of mass wasting, including mud flows, debris flows, and soil slips, occur as soil moves downslope under the influence of gravity. Landslides are frequently triggered by intense rainfall or seismic shaking. As described in Response (a) (iv), the Project site is located in a relatively flat developed urban area that does not contain or adjacent to large slopes, and the Project would not generate large slopes. Therefore, impacts related to landslides would not occur.

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures. As discussed in Response (a), the Project site is outside of a zone identified as susceptible to liquefaction. Further, the Project site then has a low potential for lateral spreading. However, all future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1).

Subsidence is a general lowering of the ground surface over a large area that is generally attributed to lowering of the ground water levels within a groundwater basin. Localized or focal subsidence or settlement of the ground can occur as a result of an earthquake motion in an area where groundwater in basin is lowered. The United States Geological Survey (USGS) has surveyed the state for areas of recorded subsidence—historical and current—across California. According to the USGS Areas of Subsidence in California Map, the Project site is within an area of subsidence as a result of excessive groundwater pumping (United States Geological Survey, 2023). As described above, all future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1).

Therefore, the Project would result in a less-than-significant impact with mitigation on the risk of landslide, lateral spreading, subsidence, liquefaction or collapse.

d) Be located on expansive soil, as defined in in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact with Mitigation. Expansive soils contain certain types of clay minerals that shrink or swell as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas with seasonal changes of soil moisture experience, such as southern

California, have a higher potential of expansive soils than areas with higher rainfall and more constant soil moisture.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. All future projects would be required to comply with applicable Federal, State, and local policies and regulations established to prevent or reduce impacts due to expansive soil, including Policy 8.5 of the Conservation/Open Space/Recreation Element, which requires City review of threats from expansive soils during the development review process (PPP GEO-2). Further, if necessary, geological investigations would be prepared and implemented for each future project to reduce significant impacts (MM GEO-1). Therefore, the project would result in a less-than-significant impact with mitigation.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. All future development would be served by the City sewer utilities and would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, the Project would result in no impact.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. Therefore, the Project site is heavily disturbed and does not contain any native undisturbed soils. However, the Project could facilitate future construction at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. The City's Conservation/Open Space/Recreation Element of the General Plan Figure COSR-2 identifies areas sensitive to paleontological resources (City of Tustin, 2018). The Project site is not located in an area identified by the General Plan as "High Paleontological Sensitivity." The City has detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential paleontological resources in the unlikely event that a resource is encountered. Therefore, the Project would result in a less-than-significant impact on a paleontological resource, site, or geologic feature.

Plans, Policies, and Programs (PPP)

The Project would be subject to the following PPP:

PPP GEO-1 **CBC Title 24, Part 2.** Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process.

PPP GEO-2 **Policy 8.5 of the Conservation/Open Space/Recreation Element.** Project applicants would be required to submit applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from

seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas, which would be reviewed by the City during plan check.

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design, Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

Mitigation Measures (MM)

MM GEO-1 All future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation.

5.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

a) through b)

Potentially Significant Impact. Global climate change is not confined to a particular project area. A typical project does not generate enough greenhouse gas (GHG) emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact. GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal.

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The provision of development intensification could result in construction and operational GHG impacts due to the introduction of new residential land uses. Specifically, the addition of mobile source emissions through the generation of residential traffic could result in a significant GHG impact. Further, the Project could result in conflicts with applicable plan, policy, and regulations adopted for the purpose of reducing the emissions of GHG. Therefore, an air quality study will be conducted for the Project to determine potential impacts and GHG impacts will be further analyzed within the EIR.

5.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. A hazardous material is defined as any material that, due to its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that a business or the local implementing agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Construction

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The Project does not propose development; however, the Project would provide for future proposed

development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element.

Future construction activities could involve the transport, use, and disposal of hazardous materials such as paints, solvents, oils, grease, and caulking. In addition, hazardous materials could be needed for fueling and servicing construction equipment on the site. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state requirements that are implemented by the City during building permitting for construction activities. These regulations include: the federal Occupational Safety and Health Act and Hazardous Materials Transportation Act; Title 8 of the California Code of Regulations (CalOSHA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. As a result, routine transport and use of hazardous materials during construction would be consistent with applicable regulations and would be less than significant.

Operation

The Project involves the provision for future development of up to 413 housing units, which involve routinely using household hazardous materials including solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the Project. Additionally, the Project would create a mixed-use environment in which residential land uses would be introduced into existing commercial land use (the Enderle Center). Existing commercial uses include a mix of office, restaurant, and retail establishments. Existing commercial uses require the routine use of similar hazardous materials as residential land uses (solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans) and would not impose additional hazards to potential future residential uses. Therefore, operation of the Project would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste, and impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact.

Construction

While the routine use, storage, transport, and disposal of hazardous materials in accordance with applicable regulations during potential future construction activities would not pose health risks or result in significant impacts; improper use, storage, transportation and disposal of hazardous materials and wastes could result in accidental spills or releases, posing health risks to workers, the public, and the environment. To avoid an impact related to an accidental release, the use of BMPs during construction are implemented as part of a SWPPP as required by the National Pollution Discharge Elimination System General Construction Permit (and included as PPP HYD-1). Implementation of an SWPPP would minimize potential adverse effects to workers, the public, and the environment. Construction contract specifications would include strict on-site handling rules and BMPs that include, but are not limited to:

- Establishing a dedicated area for fuel storage and refueling and construction dewatering activities that includes secondary containment protection measures and spill control supplies;
- Following manufacturers' recommendations on the use, storage, and disposal of chemical products used in construction;
- Avoiding overtopping construction equipment fuel tanks;
- Properly containing and removing grease and oils during routine maintenance of equipment; and
- Properly disposing of discarded containers of fuels and other chemicals.

All future development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element would be required to develop and implement a SWPPP as required through NPDES. Therefore, construction of future development would result in a less-than-significant impact.

Operation

As described previously, future operation of up to 413 residential units would include use of limited hazardous materials, such as solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. Normal routine use of typical residential products pursuant to existing regulations would not result in a significant hazard to the environment, residents, or workers in the vicinity of the Project. As a result, operation of the proposed Project would not create a reasonably foreseeable upset and accident condition involving the release of hazardous materials into the environment, and impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. The Project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive, and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by the 55 freeway, including properties west of Yorba Street. The nearest school, Loma Vista Elementary School, is located approximately 2,100 feet to the east of the Project site. However, as described previously, construction and operation of the Project could involve the use, storage, and disposal of small amounts of hazardous materials on the Project site. These hazardous materials would be limited and used and disposed of in compliance with federal, state, and local regulations, which would reduce the potential for accidental release into the environment near a school. Therefore, the Project would not emit hazardous or handle acutely hazardous materials, substances, or waste near a school, and impacts would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Department of Toxic Substances Control, 2023). Therefore, the Project would result in no impact.

e) For a project within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Airport Land Use Commission (ALUC) for Orange County has responsibility under state law for formulating a comprehensive airport land use plan (ALUP) for the anticipated growth of each public use airport and its surrounding vicinity. General Plans for cities affected by an ALUP must be consistent with that plan. The purpose of the ALUP is to safeguard the general welfare of the inhabitants within the vicinity of airports and to ensure the continued operation of the airports. The ALUC for Orange County has adopted the Airport Environs Land Use Plan (AELUP) governing John Wayne Airport, AFRC Los Alamitos, Fullerton Airport, and Heliports.

The Project site is approximately 5.5 miles to the north of the John Wayne Airport, which is the nearest airport to the Project site. The Project site is not located within any land use compatibility zone for John Wayne Airport, nor is it within an airport safety zone within the AELUP (Orange County Airport Land Use Commission, 2008). The Project's proximity to the airport would not result in potential safety hazards or excessive noise for people that would reside or work within the Project site in the future. Therefore, the Project would result in no impact.

f) Impair implementation of an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The Project site is located at the southeast of the corner of 17th Street and 55 Freeway (State Route 55), a major arterial and highway, respectively. These adjacent roadways would likely be utilized as evacuation routes in the event of an emergency evacuation of the Project site. Pursuant to the City's Emergency Operations Plan, specific evacuation requirements will vary with each situation, but should be carried out in a manner consistent with other critical functions (City of Tustin, 2019). Under ideal circumstances there will be enough time for radio and/or television stations to broadcast the required evacuation information via the Emergency Alert System, and if enough time is available, copies of the evacuation order or notice and route. The Project site is not designated as an emergency evacuation route. The Project would not impair the implementation of evacuation protocol in the event of an emergency within the City or Project site. Additionally, each future residential project implemented as part of the housing overlay and Housing Element would require a project-level plan check with the City and would be reviewed by the City's fire department (Orange County Fire Authority) to ensure proper emergency access to and from the site. Therefore, the Project would result in a less-than-significant impact.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. According to the CalFire Fire Hazard Severity Zone Map, the City of Tustin contains very high fire severity zones in the northeast portion of the City (California Department of Forestry and Fire Protection, 2023). The Project site is not located within or near state responsibility areas or lands classified as very high fire hazard severity zones. Therefore, the Project would result in no impact regarding the exposure of people or structures to risk of loss, injury, or death involving a wildland fire.

Plans, Policies, and Programs (PPP)

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

5.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in a substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact.

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The Project does not propose development; however, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element.

Construction

The Project site is located in the northwestern portion of Tustin, which is part of the Newport Bay Watershed (OC Watersheds, 2006). The entire watershed spans 154 square miles and is contained in the jurisdictional boundary of Orange County. The largest drainage, San Diego Creek, and its many tributaries begin along the coastal foothills of the Santa Ana Mountains and flow predominantly southwest into Newport Bay. The Newport Bay Watershed is within the jurisdiction of the Santa Ana Regional Water Quality Control Board (Regional Board), within the subunit of the Lower Santa Ana River Basin (designated Hydrologic Unit 801.11). The Water Quality Control Plan for the Santa Ana River Basin lists Newport Bay both Upper and Lower, as tributaries to the Pacific Ocean and also as receiving waters for San Diego Creek. The Project site is within the Tustin/Irvine/Modeno Channel Tustin/Irvine/Modeno Channel Subwatershed, which is tributary to the San Diego Creek: Reach 1. As of the 2018 303(d) impaired waters list, San Diego Creek: Reach 1 was listed as impaired for nutrients, sedimentation/siltation, selenium, toxaphene, toxicity, indicator bacteria, benthic community effects, DDT (dichlorodiphenyltrichloroethane), and malathion (California Waterboards, 2023).

Construction of future development facilitated by the Project would require grading and excavation of soils over approximately seven acres, which would loosen sediment, and then have the potential to mix with surface water runoff and degrade water quality. Additionally, construction would require the use of heavy equipment and construction-related chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents and paints. These potentially harmful materials could be accidentally spilled or improperly disposed of during construction and, if mixed with surface water runoff, could wash into and pollute waters.

These types of water quality impacts during construction would be prevented through implementation of a SWPPP (PPP HYD-1). Construction of the Project would disturb more than one acre of soil; therefore, the proposed Project would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. Construction activity subject to this permit includes clearing, grading, and ground disturbances such as trenching, stockpiling, or excavation. The Construction General Permit requires implementation of a SWPPP that is required to identify all potential sources of pollution that are reasonably expected to affect the quality of storm water discharges from the construction site. The SWPPP would generally contain a site map showing the construction perimeter, proposed buildings, stormwater collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways. The SWPPP would also include construction BMPs.

Adherence to the existing requirements and implementation of the appropriate BMPs, as ensured through the City's plan check and permitting process, would ensure that the Project would not violate any water quality standards or waste discharge requirements, potential water quality degradation associated with construction activities would be minimized, and construction impacts would be less than significant.

Operation

Future development facilitated by the Project would include operation of residential uses. Potential pollutants associated with the proposed uses include various chemicals from cleaners, pathogens from pet wastes, nutrients from fertilizer, pesticides and sediment from landscaping, trash and debris, and oil and grease from vehicles. If these pollutants discharge into existing stormwater systems, it could result in further degradation of water quality.

However, operation of the proposed Project would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP:

- Provides the framework for the program management activities and plan development;
- Provides the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensures that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues; and
- Ensures that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects develop and implement a water quality management plan (WQMP) that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. A WQMP is required to be approved prior to the issuance of a building or grading permit. WQMPs prepared for future development would be reviewed and approved by the City to ensure it complies with the MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Overall, implementation of the WQMP pursuant to the existing regulations (included as PPP HYD-3) would ensure that operation of the proposed Project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality, and impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Potentially Significant Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The Project does not propose development; however, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element. The provision for 413 additional housing units would require additional water supply, which could result in decreased groundwater supply. Therefore, this topic will be further analyzed in the EIR.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in a substantial erosion or siltation on- or off-site?

Less Than Significant Impact. The Project site does not include, and is not adjacent to, a natural stream or river. Implementation of the Project would not alter the course of a stream or river.

The Project site is currently developed with commercial uses. The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains. Stormwater drains to the southeast corner of the site into a catch basin at the Vanderberg Lane and Enderle Center Drive intersection. The storm drain then continues east and connects to the existing Orange County Flood Control District (OCFCD) facility located between Enderle Center Drive and Prospect Avenue.

Construction

Construction of future development facilitated by the Project would require the removal of asphalt within the existing parking lot areas of the Project site and excavation of underlying soils. Construction could result in a temporary disturbance of soils that could cause erosion or siltation on- and off-site.

All proposed development construction would be required to comply with the California Regional Water Quality Control Board (RWQCB) Order No. R8-2010-0033, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618033 – Construction General Permit requirements (PPP HYD-1). Requirements include installation of Best Management Practices (BMPs), which establishes minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by the RWQCB regulations to be developed by a QSD (Qualified SWPPP Developer). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures (PPP HYD-2). The City of Tustin Grading Manual is a compilation of rules, procedures, and interpretations necessary to carry out the provisions of the Tustin City Code relating to grading and excavation.

Following construction, future development would be required to prepare and implement a Water Quality Management Plan (WQMP) per City standards. Future projects would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP:

- Provides the framework for the program management activities and plan development;
- Provides the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensures that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues; and
- Ensures that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects develop and implement a water quality management plan (WQMP) that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. These requirements would ensure that future projects would not result in substantial soil erosion or the loss of topsoil. With implementation of uniformly applicable requirements (SWPPP, City of Tustin Grading Manual, and the DAMP), the Project would result in a less-than-significant impact.

Operation

Changes due to development of the Project site could result in potential changes in the drainage pattern due to siltation and erosion. However, the City's MS4 permit and County DAMP require new development projects to prepare a WQMP (included as PPP HYD-3) that is required to include BMPs to reduce the potential of erosion and/or sedimentation through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for erosion and siltation. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to alteration of a drainage pattern and erosion/siltation from operational activities would be less than significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact.

Construction

Construction of the proposed Project would require demolition of the existing building structures, including foundations, floor slabs, and utilities systems, and crushing the existing pavement. These activities could temporarily alter the existing drainage pattern of the site and change runoff flow rates. However, as described previously, implementation of the Project requires a SWPPP (included as PPP WQ-1) that would address site specific drainage issues related to construction of the Project and include BMPs to eliminate the potential of flooding or alteration of a drainage pattern during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to potential alteration of a drainage pattern or flooding on- or offsite from development activities. Therefore, construction impacts would be less than significant.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The Project does not propose development; however, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element.

Construction

Construction of future development could result in a temporary disturbance of soils and the use of construction equipment and materials that could increase pollutant loads discharged into stormwater runoff.

However, implementation of the Project requires a SWPPP (included as PPP HYD-1) that would address site-specific pollutant and drainage issues related to construction of the Project and include BMPs to eliminate the potential of polluted runoff and increased runoff during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP HYD-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to increases in run-off and pollution from development activities. Therefore, impacts would be less than significant.

Operation

The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains. Stormwater drains to the southeast corner of the site into a catch basin at the Vanderberg Lane and Enderle Center Drive intersection. The storm drain then continues east and connects to the existing Orange County Flood Control District (OCFCD) facility located between Enderle Center Drive and Prospect Avenue. Because the site is currently almost entirely paved, future development would increase intensity of development, but would not result in additional impervious surfaces that could increase the volume and velocity of stormwater

runoff. Therefore, future development would not be anticipated to exceed capacity of the existing stormwater drainage system.

Additionally, as discussed previously, the City's MS4 permit and County DAMP require new development projects to prepare a WQMP (included as PPP HYD-3) that is required to include BMPs to reduce the potential of stormwater pollutants through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for sources of polluted runoff. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to stormwater runoff would be less than significant.

iv. impede or redirect flood flows?

Less Than Significant Impact.

The Project site is in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0164J (Federal Emergency Management Agency, 2009). The Project site is within an area designated as Zone X, areas of 0.2 percent annual chance of flood; areas of 1 percent annual chance of flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood. Therefore, the Project site is not currently within a designated flood zone. The Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions. Therefore, the Project would result in a less-than-significant impact.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact.

According to the Federal Emergency Management Agency (FEMA) Map 06059C0164J, the Project site is within Flood Zone X, or the 0.2 percent annual change flood area, areas of 1 percent annual chance flood with average depth less than 1 foot or with drainage areas of less than 1 square mile (Federal Emergency Management Agency, 2009). The site is not within a special flood hazard area.

A seiche is a surface wave created when an inland body of water is shaken, usually by earthquake activity. The site also is not subject to flooding hazards associated with a seiche because there are no large body of surface water located near the project site to result in effects related to a seiche, which could result in release in pollutants due to inundation of the site. The Project site is not located near an inland body of water that could result in impacts due to seiche.

The Pacific Ocean is located over 12 miles southwest of the Project site; consequently, there is no potential for the Project site to be inundated by a tsunami that could release pollutants. In addition, the Project site is flat and not located near any steep hillsides; therefore, there is no potential for the site to be adversely affected by mudflow. Thus, implementation of the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow that could release pollutants due to inundation of the Project site. No impact would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Potentially Significant Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The Project does not propose development; however, the

Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element. The provision for 413 additional housing units would require additional water supply, which could result in conflict with a sustainable groundwater management plan. Therefore, this topic will be further analyzed in the EIR.

Plans, Policies, and Programs (PPP)

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

5.11 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

a) Physically divide an established community?

No Impact.

The Project site is currently developed as the Enderle Center, a commercial center that includes restaurant, retail, and office uses. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The Project does not propose development; however, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element. Implementation of the Project would allow for the intensification of the existing site; however, the introduction of residential land uses would not result in division of an established community. Therefore, the Project would result in no impact.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact.

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The introduction of residential land uses to an existing commercial site could result in conflicts with existing land use plans, policies, and regulations. Therefore, the Project could result in a potentially significant impact and this topic will be analyzed in the EIR.

5.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. In order to protect the availability of mineral resources of value, the California Department of Conservation identifies sites to which continuing access is important to satisfying mineral production needs of the region and the State. The relative importance of potential mineral resource sites is indicated by inclusion in one of four Mineral Resource Zones (MRZ):

- MRZ 1: No mineral resources
- MRZ 2: Significant resource area (quality and quantity known)
- MRZ 3: Significant resource area (quality and quantity unknown)
- MRZ 4: No information (applies primarily to high-value ores)

The Conservation/Open Space/Recreation Element identifies one mineral resource within the Tustin Planning Area known as Mercury-Barite in Red Hill (City of Tustin, 2018). However, this resource is not utilized. The Project site is not identified for mineral resource extraction. Therefore, the Project would result in no impact on the loss of availability of a known mineral resource.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on the general plan, specific plan. or other land use plan?

No Impact. As discussed above, the Project site is not identified for mineral resource extraction per the City General Plan Conservation Element (City of Tustin, 2018). Therefore, the Project would result in no impact on the loss of availability of a locally important mineral resource recovery.

5.13 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐

a) through c)

Potentially Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The provision of development intensification could facilitate future noise impacts. Residential land uses have not been previously analyzed for consistency with applicable noise standards. The addition of residential land uses could result in a cumulatively considerable net increase of noise within the study area due to the introduction of new mobile and stationary noise sources. Therefore, a noise study will be conducted for the Project to determine potential noise impacts and this topic will be further analyzed within the EIR.

5.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☒	☐	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Induce substantial unplanned population growth in an area, either directly or indirectly?

Potentially Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The provision of residential development within the Project site was not previously analyzed under existing local or regional housing and land use plans. Therefore, the Project could facilitate substantial unplanned population growth and this topic will be further analyzed within the EIR.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project would include land use changes to allow for the future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element, within an existing commercial land use. Therefore, the Project would not result in the displacement of existing people or housing and there would be no impact.

5.15 PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Fire protection?	☐	☐	☐	☐
ii) Police protection?	☐	☐	☐	☐
iii) Schools?	☐	☐	☐	☐
iv) Parks?	☐	☐	☐	☐
v) Other public facilities?	☐	☐	☐	☐

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for:

Potentially Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. As previously discussed, the provision of residential development within the Project site was not previously analyzed under existing local or regional plans and could result in substantial unplanned population growth. Therefore, the potential unplanned future demand placed on public service providers could require the development of new or physically altered fire, police, school, park, and library facilities. The Project could result in a potentially significant impact and this topic will be further analyzed within the EIR.

5.16 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☐

a) and b)

Potentially Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. As previously discussed, the provision of residential development within the Project site was not previously analyzed under existing local or regional plans and could result in substantial unplanned population growth. Therefore, the potential unplanned future demand placed on recreational facilities could result in deterioration of nearby recreational facilities and/or require the development of new or physically altered recreational facilities. The Project could result in a potentially significant impact and this topic will be further analyzed within the EIR.

5.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☒	☐	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
d) Result in inadequate emergency access?	☒	☐	☐	☐

a) through d)

Potentially Significant Impact. The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. The Project does not propose development; however, the Project would provide for future proposed development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element. Future residential development would result in the generation of additional trips and demand placed on the existing circulation system. Land use changes could result in inconsistencies with programs, plans, policies, and local ordinances regarding the circulation system. Further, future residential development could result in a Vehicle Miles Traveled (VMT) Impact. Therefore, a VMT study will be prepared for the Project and this topic will be analyzed in the EIR.

5.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☒	☐	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☒	☐	☐	☐

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Potentially Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project site is currently developed as a commercial site and is surrounded by other commercial developments.

Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources (Public Resources Code § 21074). Pursuant to Assembly Bill 52 (AB 52), the City will conduct consultation with tribes that indicate an interest in consulting on the Project. The results of the consultation will be incorporated into the EIR, and this topic will be further analyzed.

5.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☐

a) through e)

Potentially Significant Impact. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The Project would include a GPA, CA and rezone of the Project site with a Housing Overlay (HO) district to allow for future development of up to 413 housing units, consistent with the City's certified 2021-2029 Housing Element. As previously discussed, the provision of residential development within the Project site was not previously analyzed under existing local or regional plans and could result in substantial unplanned population growth. The potential demand that could result from additional residential uses could surpass the existing capacity and availability of resources and existing utility infrastructure. Therefore, the potential unplanned future demand placed on water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities could require the development of construction of new or expanded utility facilities. Additionally, future waste potentially generated by residential land uses could exceed the solid waste capacity and standards/reduction goals for the Project site. The Project could result in a potentially significant impact and this topic will be further analyzed within the EIR.

5.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

a) through d)

No Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. According to the CalFire Fire Hazard Severity Zone Map, the City of Tustin contains very high fire severity zones in the northeast portion of the City (California Department of Forestry and Fire Protection, 2023). The Project site is not located within or near state responsibility areas or lands classified as very high fire hazard severity zones. Therefore, the project would result in no impact due to wildfire hazard.

5.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact with Mitigation. As discussed in Section 5.4, the Project site is currently developed and does not contain habitat of a fish or wildlife species. However, the Project site contains existing ornamental trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibits disturbing or destroying active nests. Therefore, Mitigation Measure BIO-1 has been included to require that if commencement of vegetation clearing occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. With implementation of Mitigation Measure BIO-1, potential impacts to nesting birds would be less than significant.

Additionally, as described in Section 5.5, the project site does not contain any buildings or structures that meet any of the California Register of Historical Resources (California Register) criteria or qualify as "historical resources" as defined by CEQA. Additionally, the Project site is completely paved and is not anticipated to contain archaeological resources; however, Mitigation Measure CUL-1 has been included to stop all ground disturbing activity within a 50-foot radius of an inadvertent discovery in the unlikely event that a potential archeological resource is unearthed during excavation activities. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical or archaeological resource. As discussed in Section 5.8, the Project site is not sensitive to paleontological resources.

Therefore, the Project would result in a less than significant impact with mitigation on the potential to

substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Potentially Significant Impact. Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. The CEQA Guidelines, Section 15130 (a) and (b), states:

a) Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.
b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.

As presented in this document, potential Project-related impacts are either less than significant or would be less than significant with mitigation incorporated for impacts related to aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, mineral resources, and wildfire risk. Given that the potential Project-related impacts would be less than significant or mitigated to a less than significant level, implementation of the proposed Project would not result in impacts that are cumulatively considerable when evaluated with the impacts of other current projects, or the effects of probable future projects. Therefore, the proposed Project's contribution to any significant cumulative impacts would be less than cumulatively considerable for aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, mineral resources, and wildfire risk.

The Project could result in significant impacts on several environmental topics, and further, cumulatively considerable impacts. Specifically, the Project has the potential to result in cumulatively considerable impacts on energy, GHG, land use, noise, population and housing, public services, recreation, transportation, tribal cultural resources, and utilities and service systems. The Project's potential for contribution to cumulatively considerable impacts will be further analyzed within the EIR.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. As discussed in Sections 5.3, 5.11, and 5.13, the Project could facilitate development that could result in significant air quality and noise impacts, as well as conflict with policies implemented to mitigate environmental impacts on existing populations. An air quality and noise study will be prepared for the Project to evaluate potential impacts on human beings, with specific focus on sensitive receptor populations. Therefore, the Project could result in a potentially significant impact and this topic will be further analyzed in the EIR.

6 REFERENCES

BFSA Environmental Services. (2023). *Archaeological Resources Records Search Results for the Enderle Center Project, Tustin,*.

BFSA Environmental Services. (2023). *Archaeological Resources Records Search Results for the Tustin Legacy Specific PlanAmendment Project, Tustin, California*.

California Department of Conservation. (2018, November 1). *DOC Maps: Division of Land Resource Protection*. Retrieved November 6, 2023, from California Important Farmland Finder: https://maps.conservation.ca.gov/DLRP/CIFF/

California Department of Forestry and Fire Protection. (2022). *Fire and Resource Assessment Program*. Retrieved from California Department of Forestry and Fire Protection: California Department of Forestry and Fire Protection

California Department of Forestry and Fire Protection. (2023, December 19). *CalFire Hazard Severity Zone Viewer*. Retrieved from Fire and Resource Assessment Program: https://egis.fire.ca.gov/FHSZ/

California Department of Transportation. (2018). *California State Scenic Highway System Map*. Retrieved from https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa

California Geological Survey. (1994). *Generalized Mineral Land Classification Map of Orange County*. Retrieved from Open File Report 94-15, Plate 1. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-15/OFR_94-15_Plate_1.pdf.

California Geological Survey. (2020, July 29). *California State Geoportal*. Retrieved from CGS Seismic Hazards Program: Liquefaction Zones: https://gis.data.ca.gov/datasets/cadoc::cgs-seismic-hazards-program-liquefaction-zones

California State Water Resources Control Board. (2022, September 8). *National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit)*. Retrieved from California State Water Resources Control Board: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/docs/2022-0057-dwq-with-attachments/cgp2022_order.pdf

California Waterboards. (2023). *California 2018 Integrated Report Map*. Retrieved from California 2018 Integrated Report: https://www.waterboards.ca.govHeader ControllerCalifornia 2018 Integrated Report

City of Tustin. (2018, November). *City of Tustin General Plan*. Retrieved from https://www.tustinca.org/DocumentCenter/View/713/City-of-Tustin-General-Plan-PDF

City of Tustin. (2019, November). *Emergency Operations Plan*. Retrieved from EMERGENCY OPERATIONS PLAN (EOP): https://www.tustinca.org/DocumentCenter/View/570/Emergency-Operations-Plan-PDF

County of Orange. (2005, April). *County of Orange General Plan*. Retrieved from Chapter IV Scenic Highway Plan Map: https://ocds.ocpublicworks.com/sites/ocpwocds/files/import/data/files/8588.pdf

Department of Toxic Substances Control. (2023, December 22). *Hazardous Waste and Substances Sites List*. Retrieved from Envirostar: https://www.envirostor.dtsc.ca.gov/public/

EPD Solutions. (2024). *Danielle Example*. Retrieved from EPD Solutions: www.cool.com

EPD Solutions. (2024). *EPD Solutions*. Retrieved from Jeremy Krout: www.cool.com

Federal Emergency Management Agency. (2009, December 3). *06059C0279J*. Retrieved from FEMA Flood Map Service Center: https://msc.fema.gov/portal/home

Federal Emergency Management Agency. (2009, December 3). *Map Number 06059C0164J*. Retrieved from Federal Insurance Rate Map: https://msc.fema.gov/portal/search?AddressQuery=enderle%20center%2C%20tustin%2C%20ca

OC Watersheds. (2006, July). *Proposed 2007 Drainage Area Management Plan*. Retrieved from Newport Bay Watershed Action Plan: https://ocerws.ocpublicworks.com/sites/ocpwocerws/files/2021-02/Newport%20Bay%20WAP.pdf

Orange County Airport Land Use Commission. (2008, April 17). *Land Use Plan for John Wayne Airport*. Retrieved from Orange County Airport Land Use Commission: https://files.ocair.com/media/2021-02/JWA_AELUP-April-17-2008.pdf?VersionId=cB0byJjdad9OuY5im7Oaj5aWaT1FS.vD

Orange County Transportation Authority. (2016, November). Retrieved from Natural Community Conservation Plan/Habitat Conservation Plan: https://www.octa.net/pdf/NCCP%20HCP%20FINAL.pdf

Parrish, J. G. (1998, April 15). *Earthquake Zones of Required Investigation, Orange Quadrangle*. Retrieved from California Geological Survey: https://maps.conservation.ca.gov/cgs/EQZApp/app/

Parrish, J. G. (1999, March 25). *Earthquake Zones of Required Investigation, Seal Beach Quadrangle*. Retrieved from California Geological Survey: https://maps.conservation.ca.gov/cgs/EQZApp/app/

Parrish, J. G. (2015, December 4). *Earthquake Zones of Required Investigation, Yorba Linda Quadrangle*. Retrieved from California Geological Survey: https://maps.conservation.ca.gov/cgs/EQZApp/app/

Placeworks. (2015). *Tustin Legacy Specific Plan Amendment Initial Study*. City of Tustin.

State Water Resource Control Board. (2023). *GeoTracker*. Retrieved from https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=tustin+legacy%2C+tustin%2C+ca

U.S. Geological Survey. (2001). *Areas of Land Subsidence in California*. Retrieved November 10, 2023, from LA / Santa Ana Basin: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html

U.S. Geological Survey. (2023, October 31). *National Land Cover Database*. Retrieved November 6, 2023, from NLCD 2021 Land Cover California Subset: https://data.ca.gov/dataset/nlcd-2021-land-cover-california-subset

United States Geological Survey. (2023, December 19). *Areas of Land Usbsidence in California*. Retrieved from USGS: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html

End of document.

February 16, 2024

Jazmin Rodriguez
EPD Solutions
3333 Michelson Drive, Suite 500
Irvine, California 92660

RE: Archaeological Resources Records Search Results for the Enderle Center Project, Tustin, California (APNs 401-252-05, -06, -08, through -10, 401-253-03, and -04)

Dear Ms. Rodriguez:

An archaeological resources records search has been completed for the Enderle Center Project. The proposed approximately 11-acre project is located at the intersection of 17th Street and Enderle Center Drive (Assessor's Parcel Numbers [APNs] APNs 401-252-05, -06, -08, through -10, 401-253-03, and -04) within the city of Tustin, California. The subject property is situated within an unsectioned portion of Township 5 South, Range 9 West on the U.S. Geological Survey (USGS) *Orange*, *California* (7.5-minute) topographic quadrangle map. As part of the environmental review process, BFSA Environmental Services, a Perennial Company (BFSA), conducted an archaeological resources records search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton.

Archaeological Records Search Results

The archaeological resources records search was completed by BFSA at the SCCIC on August 22, 2023, and encompassed the project area as well as an additional 500 feet surrounding the project. Based upon the records search results, no resources are recorded within the project or the 500-foot buffer search area. No previous studies are recorded on the property, however, there are two studies recorded within the search area that are not specific to the subject property (Padon 1989; McKenna 2001).

BFSA requested a review of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC) on August 18, 2023, to determine if any recorded Native American sacred sites, or locations of religious or ceremonial importance are present within one mile of the project. The results of this search were received on October 3, 2023. The results were negative.

The full results of the SCCIC completed records search and the NAHC SLF search results are attached to this letter report (Attachments A and B). Please contact us should you have any questions or require additional study for this project.

Regards,

Tracy Stropes, M.A., RPA
Director/Principal Archaeologist
BFSA Environmental Services

Attachments:

Attachment A – Archaeological Records Search Results
Attachment B – NAHC Sacred Lands File Search Results

ATTACHMENT A

Archaeological Records Search Results

BFSA Environmental Services, a Perennial Company

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEMS

RECORDS SEARCH

Company:	BFSA Environmental Services, a Perennial Company
Processed By:	Emily T. Soong
Date Processed:	August 24, 2023
Project Identification:	Enderle Center
Information Center:	South Central Coastal Information Center
Search Radius:	500 Feet Buffer

Historical Resources:

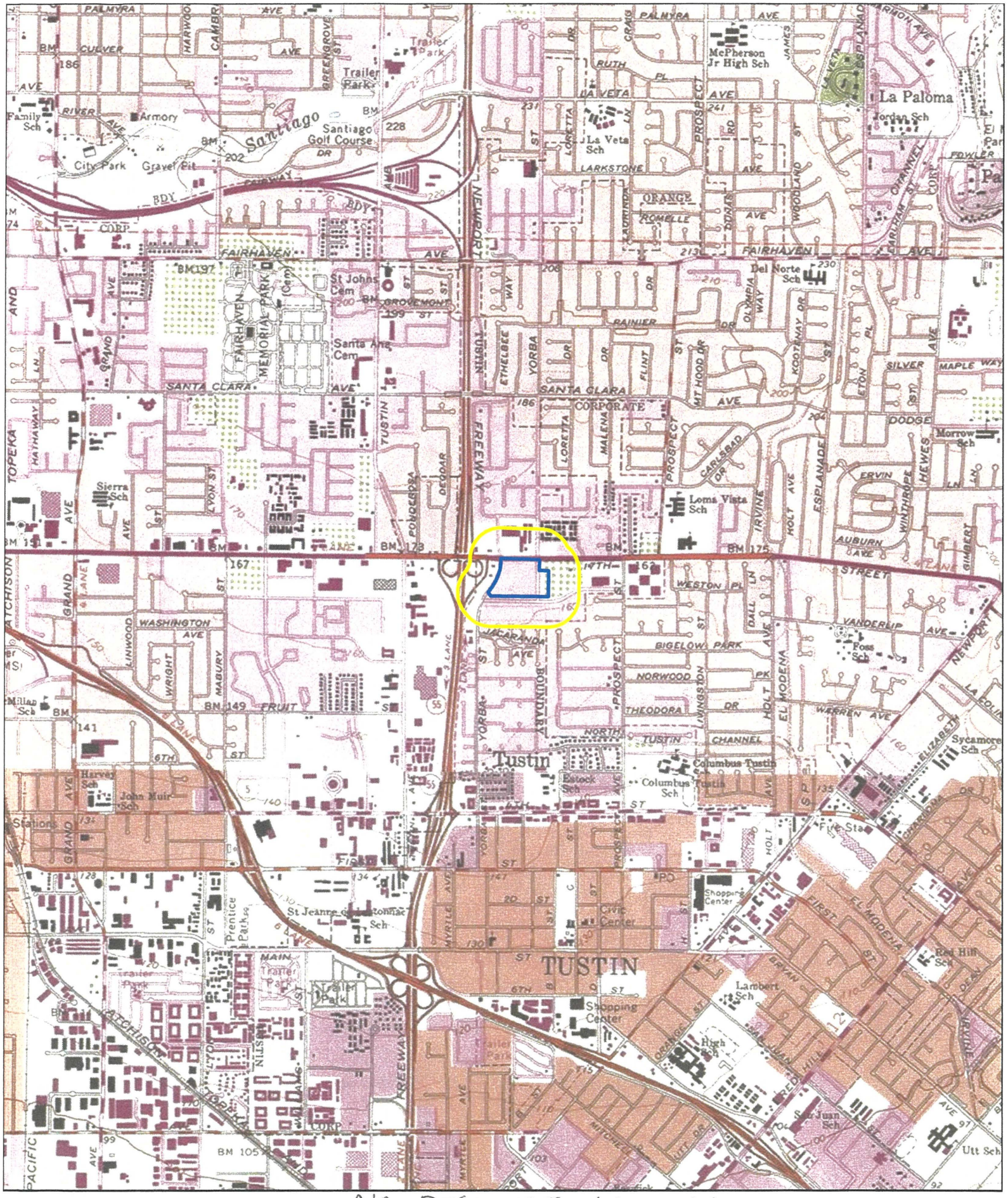
Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been reviewed for all recorded sites.

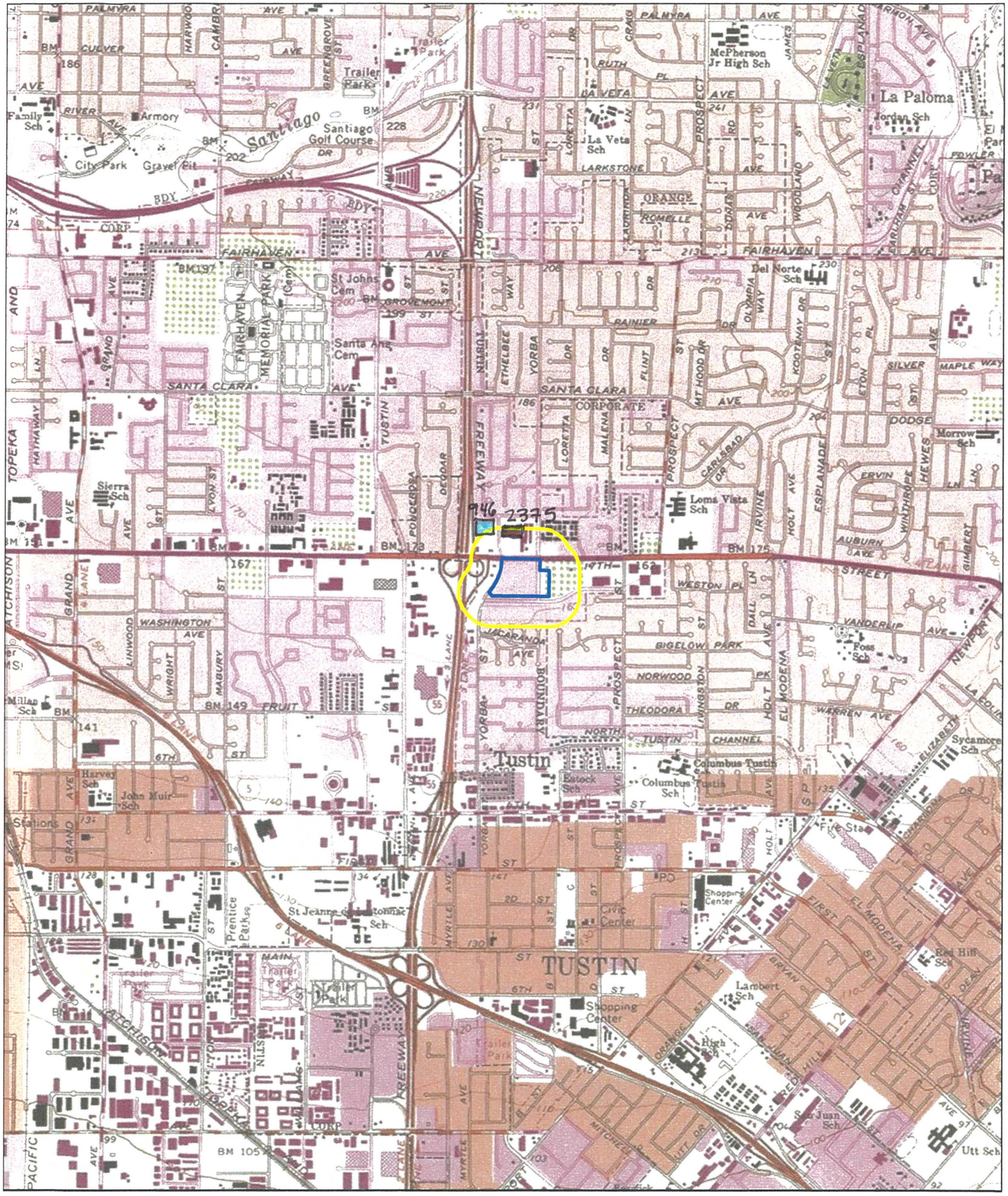
There are no resources located within a 500 feet radius of the current project area or within the subject property.

Previous Survey Report Boundaries:

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been reviewed.

There are two reports within a 500 feet radius of the current project area, none of which are located within the subject property.


PALMYRA AVE
Trailer Park
McPherson Jr High Sch
La Paloma
Jordan Sch
Armory
Santiago Golf Course
City Park
Gravel Pit
La Veta Sch
ORANGE
FAIRHAVEN AVE
St Johns Cem
Santa Ana Cem
Del Norte Sch
SANTA CLARA AVE
CORPORATE
Sierra Sch
Loma Vista Sch
DODGE
Morrow Sch
WASHINGTON AVE
Tustin
Foss Sch
Columbus Tustin Sch
Harvey Sch
John Muir Sch
Stations
Fire
Prentice Park
St Jeanne d'Arc Sch
Civic Center
PO
TUSTIN
Shopping Center
Lambert Sch
Red Hill Sch
Utt Sch
NEWPORT
FREEWAY
ATCHISON
PACIFIC
NO RESOURCES IN SEARCH AREA
500 Ft Buffer
Project
Enderle Center Project
USGS Orange Quadrangle
(7.5-minute series)
N
Resource
1:24,000
ETS BFSAES: 8/18/2023



500 Ft Buffer

Project

Enderle Center Project
USGS *Orange* Quadrangle
(7.5-minute series)

Reports
1:24,000

ETS BFSAES: 8/18/2023

Report List

Ender Ie Center

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00946	Paleo -	1989	Padon, Beth	Archaeological and Paleontological Review for 13911, 13931, and 13951 Carroll Way, Tustin, Ca.	LSA Associates, Inc.	
OR-02375	Cellular -	2001	McKenna, Jeanette A.	Review of Culutral Resource Assessment/evaluation for Cingular Wireless Site Sc-001-01, Orange County, California	McKenna et al.	

ATTACHMENT B

NAHC Sacred Lands File Search Results

August 18, 2023

For: Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

From: Emily T. Soong
BFSA Environmental Services, a Perennial Company
14010 Poway Rd. Suite A
Poway, CA 92064

Re: Request for Sacred Lands File and Native American Contact List for the Enderle Center Project, Tustin, Orange County, California.

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: Enderle Center Project (Project No. 23-222). The project is an archaeological study located southeast of the intersection of Yorba Street and 17th Street (APNs 401-252-05, -06, -08, -09, -10, 401-253-03, -04), Tustin, Orange County, California. Specifically, the project is in an unsectioned portion of Township 5 South, Range 9 West as seen on the USGS *Orange*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.

Thank you for your time.

Sincerely,

Emily T. Soong
Graphics/GIS
Billing: 14010 Poway Road, Suite A, Poway, CA 92064
Phone: 858-484-0915
Email: esoong@bfsa.perennialenv.com

Attachments:
USGS 7.5 *Orange,* California, topographic maps with project area delineated.
Sacred Lands File request form

Sacred Lands File & Native American Contacts List Request
NATIVE AMERICAN HERITAGE COMMISSION
915 Capitol Mall, RM 364 ∗ Sacramento, CA 95814 ∗ (916) 653-4082
(916) 657-5390 – Fax ∗ nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: Enderle Center Project (Project No. 23-222)

County: Orange

USGS Quadrangle Name(s): *Orange*

Township 5 South, Range 9 West

Company/Firm/Agency: BFSA Environmental Services, a Perennial Company

Contact Person: Emily T. Soong

Street Address: 14010 Poway Road, Suite A

City: Poway Zip: 92064

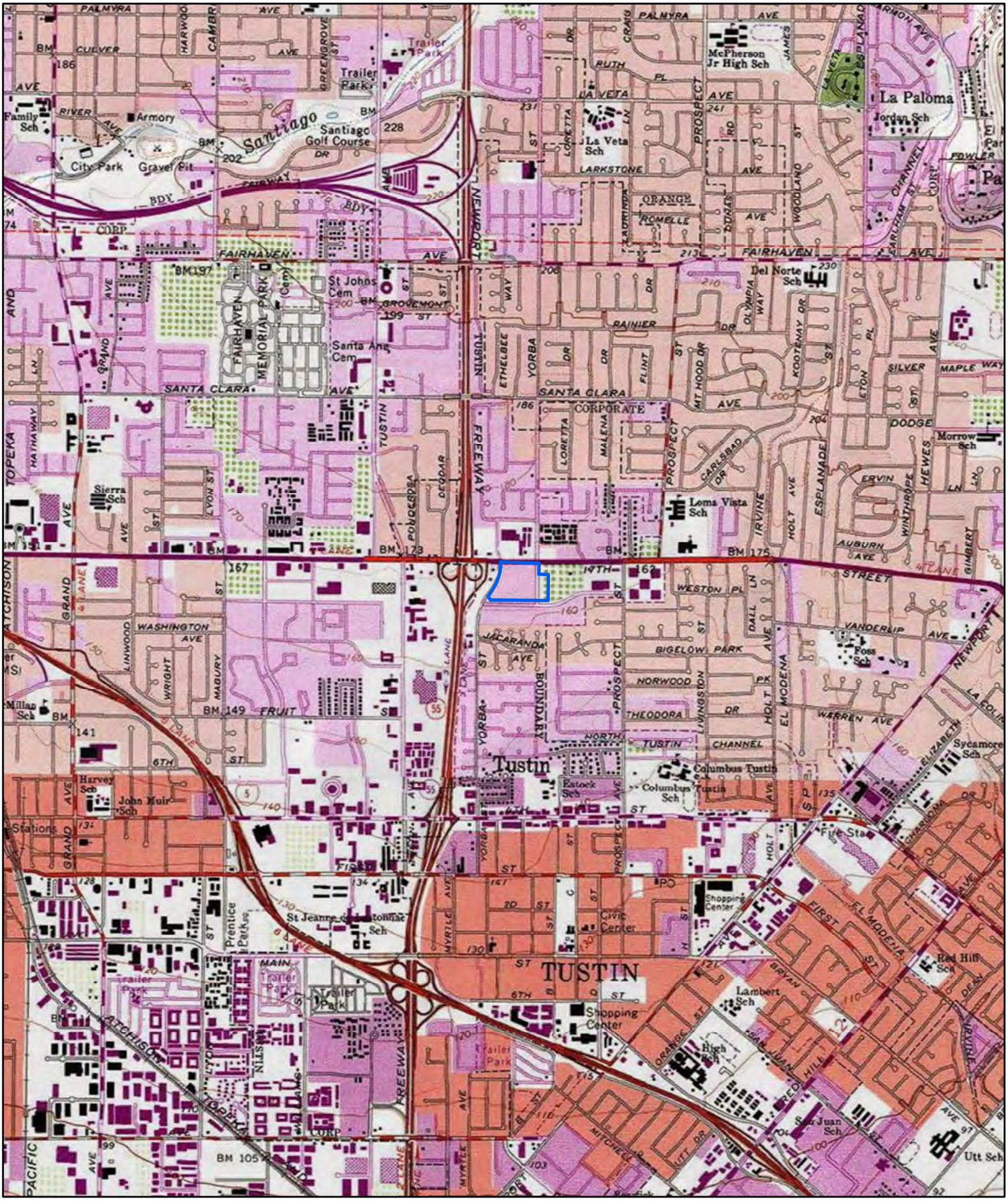
Phone: 858-484-0915

Fax: 858-679-9896

Email: esoong@bfsa.perennialenv.com

Project Description:

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: Enderle Center Project (Project No. 23-222). The project is an archaeological study located southeast of the intersection of Yorba Street and 17th Street (APNs 401-252-05, -06, -08, -09, -10, 401-253-03, -04), Tustin, Orange County, California. Specifically, the project is in an unsectioned portion of Township 5 South, Range 9 West as seen on the USGS *Orange*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.



Project

Enderle Center Project
USGS *Orange* Quadrangle
(7.5-minute series)

1:24,000

ETS BFSAES: 8/18/2023

From: NAHC@NAHC
To: Emily Soong
Cc: Green, Andrew@NAHC
Subject: RE: Request for Sacred Land Search for The Market Place Project (23-223)
Date: Saturday, August 19, 2023 9:16:27 AM
Attachments: image001.png
The Market Place Project Sacred Lands File form.pdf
The Market Place Project NAHC Search Request.pdf
The Market Place Map.pdf

This sender is trusted.

Hello,

Thank you for your message. We're in receipt of your request. We have recently hired new staff, and this change in our office is creating some delays. We estimate a turn-around time of 4 weeks and don't anticipate responding sooner than the end of that time frame. Please let us know if you have any questions.

Kind regards,

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
(916) 373-3710

From: Emily Soong <esoong@bfsa.perennialenv.com>
Sent: Friday, August 18, 2023 10:48 AM
To: NAHC@NAHC <NAHC@nahc.ca.gov>
Cc: Jenni Stropes <jstropes@bfsa.perennialenv.com>
Subject: Request for Sacred Land Search for The Market Place Project (23-223)

To whom it may concern,

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: The Market Place Project (Project No. 23-223). The project is an archaeological study located north of the intersection of Jamboree Road and Santa Ana Freeway (APNs 500-291-02, -04, -06, -07, -08, -11, -21, -23, -24, -25, -26, -27, 500-312-01, -02, -04, -06, -08, -09), Tustin, Orange County, California. Specifically, the project is in former Lomas De Santiago and San Joaquin Ranchos, Township 1 South, Range 6 West as seen on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.

Best regards,

Emily T. Soong
BFSA Environmental Services

Phone: 858-484-0915

Email: esoong@bfsa.perennialenv.com

14010 Poway Road, Suite A

Poway, CA 92064

www.bfsa-ca.com

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Vacant

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

October 3, 2023

Emily T. Soong
BFSA Environmental Services

Via Email to: esoong@bfsa.perennialenv.com

Re: Enderle Center Project, Orange County

Dear Ms. Soong:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Orange County
10/3/2023

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrieleno Band of Mission Indians - Kizh Nation	N	Christina Swindall Martinez, Secretary	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno Band of Mission Indians - Kizh Nation	N	Andrew Salas, Chairperson	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno/Tongva San Gabriel Band of Mission Indians	N	Anthony Morales, Chairperson	P.O. Box 693 San Gabriel, CA, 91778	(626) 483-3564	(626) 286-1262	GTTribalcouncil@aol.com	Gabrieleno
Gabrielino /Tongva Nation	N	Sandonne Goad, Chairperson	106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012	(951) 807-0479		sgoad@gabrielino-tongva.com	Gabrielino
Gabrielino Tongva Indians of California Tribal Council	N	Robert Dorame, Chairperson	P.O. Box 490 Bellflower, CA, 90707	(562) 761-6417	(562) 761-6417	gtongva@gmail.com	Gabrielino
Gabrielino Tongva Indians of California Tribal Council	N	Christina Conley, Cultural Resource Administrator	P.O. Box 941078 Simi Valley, CA, 93094	(626) 407-8761		christina.marsden@alumni.usc.edu	Gabrielino

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrielino-Tongva Tribe	N	Sam Dunlap, Cultural Resource Director	P.O. Box 3919 Seal Beach, CA, 90740	(909) 262-9351		tongvatcr@gmail.com	Gabrielino
Gabrielino-Tongva Tribe	N	Charles Alvarez, Chairperson	23454 Vanowen Street West Hills, CA, 91307	(310) 403-6048		Chavez1956metro@gmail.com	Gabrielino
Juaneno Band of Mission Indians Acjachemen Nation - Belardes	N	Joyce Perry, Cultural Resource Director	4955 Paseo Segovia Irvine, CA, 92603	(949) 293-8522		kaamalam@gmail.com	Juaneno
Juaneno Band of Mission Indians Acjachemen Nation 84A	N	Heidi Lucero, Chairperson, THPO	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(562) 879-2884		jbmian.chairwoman@gmail.com	Juaneno
Pala Band of Mission Indians	F	Alexis Wallick, Assistant THPO	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3537		awallick@palatribe.com	Cupeno Luiseno
Pala Band of Mission Indians	F	Shasta Gaughen, Tribal Historic Preservation Officer	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3515	(760) 742-3189	sgaughen@palatribe.com	Cupeno Luiseno
Santa Rosa Band of Cahuilla Indians	F	Lovina Redner, Tribal Chair	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	lsaul@santarosa-nsn.gov	Cahuilla

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	(951) 654-4198	jvaldez@soboba-nsn.gov	Cahuilla Luiseno
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Enderle Center Project, Orange County.

Appendix B
Air Quality, Energy, and Greenhouse Gas Report

AIR QUALITY, ENERGY, AND GREENHOUSE GAS IMPACT REPORT

ENDERLE CENTER PROJECT

CITY OF TUSTIN, CALIFORNIA

LSA

May 2024

AIR QUALITY, ENERGY, AND GREENHOUSE GAS IMPACT REPORT

ENDERLE CENTER PROJECT

CITY OF TUSTIN, CALIFORNIA

Submitted to:

EPD Solutions, Inc.
3333 Michelson Drive, Suite 500
Irvine, California 92612

Prepared by:

LSA
3210 El Camino Real, Suite 100
Irvine, California 92602
(949) 553-0666

Project No. ESL2201.76

LSA

May 2024

TABLE OF CONTENTS

TABLE OF CONTENTS i
FIGURES AND TABLES iii
LIST OF ABBREVIATIONS AND ACRONYMS iv
INTRODUCTION 1
Project Location 1
Project Description 1
Existing Land Uses in the Project Area 5
BACKGROUND 6
Air Pollutants and Health Effects 6
Ozone 7
Carbon Monoxide 7
Particulate Matter 7
Nitrogen Dioxide 7
Sulfur Dioxide 7
Lead 8
Volatile Organic Compounds 8
Toxic Air Contaminants 8
Energy 12
Electricity 12
Natural Gas 12
Fuel 13
Greenhouse Gases 14
Carbon Dioxide 15
Methane 16
Nitrous Oxide 16
Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride 16
Black Carbon 16
REGULATORY SETTING 18
Air Quality Regulations 18
Federal Regulations 18
State Regulations 18
Regional Regulations 19
Local Regulations 22
Energy Regulatory Setting 23
Federal Regulations 24
State Regulations 24
Regional Regulations 26
Local Regulations 26
Greenhouse Gas Regulatory Setting 27
Federal Regulations 27
State Regulations 27
Regional Regulations 34
Local Regulations 35

SETTING 36
Attainment Status 36
Existing Climate and Air Quality 36
Air Quality Monitoring Results 38
Greenhouse Gas Emissions Inventory 38
Global Emissions 38
United States Emissions 38
State of California Emissions 40
METHODOLOGY 41
Construction Emissions 41
Operational Emissions 41
Energy Use 42
Greenhouse Gas Analysis 42
THRESHOLDS OF SIGNIFICANCE 43
Criteria Pollutant Thresholds 43
Localized Impacts Analysis 44
Local Microscale Concentration Standards 45
Greenhouse Gas Threshold 45
IMPACTS ANALYSIS 47
Air Quality Impacts 47
Consistency with Applicable Air Quality Plans 47
Criteria Pollutant Analysis 49
Health Risk on Nearby Sensitive Receptors 54
Asbestos 57
Odors 57
Energy Impacts 58
Energy Consumption 58
Conflict with Renewable Energy or Energy Efficiency Plans 61
Greenhouse Gas Impacts 61
Generation of Greenhouse Gas Emissions 62
Consistency with Greenhouse Gas Emissions Reduction Plans 65
Cumulative Impacts 68
Cumulative Air Quality Impacts 68
Cumulative Energy Impacts 70
Cumulative Greenhouse Gas Impacts 71
CONCLUSION 72

APPENDICES

A: CALEEMOD OUTPUT SHEETS
B: DETAILED ENERGY CALCULATIONS

FIGURES AND TABLES

FIGURES

Figure 1: Regional Project Location 2
Figure 2: Project Site 3

TABLES

Table A: Sources and Health Effects of Air Pollutants 9
Table B: Federal and State Ambient Air Quality Standards 10
Table C: Global Warming Potential of Greenhouse Gases 15
Table D: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets 30
Table E: Attainment Status of Criteria Pollutants in the South Coast Air Basin 36
Table F: Ambient Air Quality at the Nearby Monitoring Stations 39
Table G: Regional Thresholds for Construction and Operational Emissions 44
Table H: South Coast Air Quality Management District Localized Significance Thresholds 45
Table I: Tentative Project Construction Schedule 50
Table J: Diesel Construction Equipment Utilized by Construction Phase 51
Table K: Project Construction Emissions 51
Table L: Project Operational Emissions 53
Table M: Project Localized Construction Emissions (lbs/day) 55
Table N: Project Localized Operational Emissions (lbs/day) 55
Table O: Energy Consumption Estimates during Construction 59
Table P: Energy Consumption Estimates during Operation 60
Table Q: Greenhouse Gas Emissions (MT/yr) 63
Table R: Cumulative Projects List 69

LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BTU	British thermal units
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Commission
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission

CEQA	California Environmental Quality Act
CH_4	methane
City	City of Tustin
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Orange
CPUC	California Public Utilities Commission
DPM	diesel particulate matter
du/ac	dwelling units per acre
EIA	Energy Information Administration
EIR	Environmental Impact Report
EMFAC	California Emissions Factor Model
EO	Executive Order
GHG	greenhouse gas
GPA	General Plan Amendment
GWh	gigawatt-hour
GWP	global warming potential
H_2S	hydrogen sulfide
HFCs	hydrofluorocarbons
HOD	Housing Overlay District
IPCC	Intergovernmental Panel on Climate Change
kWh	kilowatt-hour
lbs/day	pounds per day

LCFS	Low Carbon Fuel Standard
LST	Local Significance Threshold
mg/m^3	milligrams per cubic meter
MMT	million metric tons
MMT CO_2e	million metric tons of carbon dioxide equivalent
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MT	metric tons
MT CO_2e	metric tons of carbon dioxide equivalent
MT CO_2e/yr	metric tons of carbon dioxide equivalent per year
MT CO_2e/yr/SP	metric tons of carbon dioxide equivalent per year per service population
MW	megawatt
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone (or smog)
OPR	Governor's Office of Planning and Research
PC COM	Planned Community Commercial
PCCB	Planned Community Commercial/Business

PFCs	perfluorocarbons
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in size
PM_{10}	particulate matter less than 10 microns in size
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
project	Tustin Enderle Center Project
RCP	Regional Comprehensive Plan
RHNA	Regional Housing Needs Allocation
ROCs	reactive organic compounds
ROGs	reactive organic gases
RPS	Renewables Portfolio Standard
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SO_X	sulfur oxides
SoCalGas	Southern California Gas Company

sq ft	square foot/feet
sq mi	square mile
SR-55	State Route 55
TAC	toxic air contaminant
UNFCCC	United Nations Framework Convention on Climate Change
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOCs	volatile organic compounds
ZC	Zone Change
ZCA	Zoning Code Amendment
ZEV	zero-emission vehicle
ZNE	zero net energy

INTRODUCTION

This Air Quality, Energy, and Greenhouse Gas (GHG) Impact Report has been prepared to evaluate the potential air quality, energy, and GHG emissions impacts associated with the Enderle Center Project (project) in the City of Tustin (City), County of Orange (County), California. This report follows the guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its *California Environmental Quality Act (CEQA) Air Quality Handbook*,[1] and associated updates. In keeping with these guidelines, this analysis describes existing air quality, including air quality and GHG emissions generated from project-related sources, regional air pollution, and global climate change. In addition, this analysis discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

PROJECT LOCATION

The 11.8-acre project site consists of Assessor's Parcel Numbers (APNs) 401-251-04, 401-251-06; 401-252-05, 401-252-06, 401-252-08, 401-252-09, 401-252-10; and 401-253-04 and 401-253-03. The project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by State Route 55 (SR-55), including properties west of Yorba Street. The project location is shown in Figure 1.

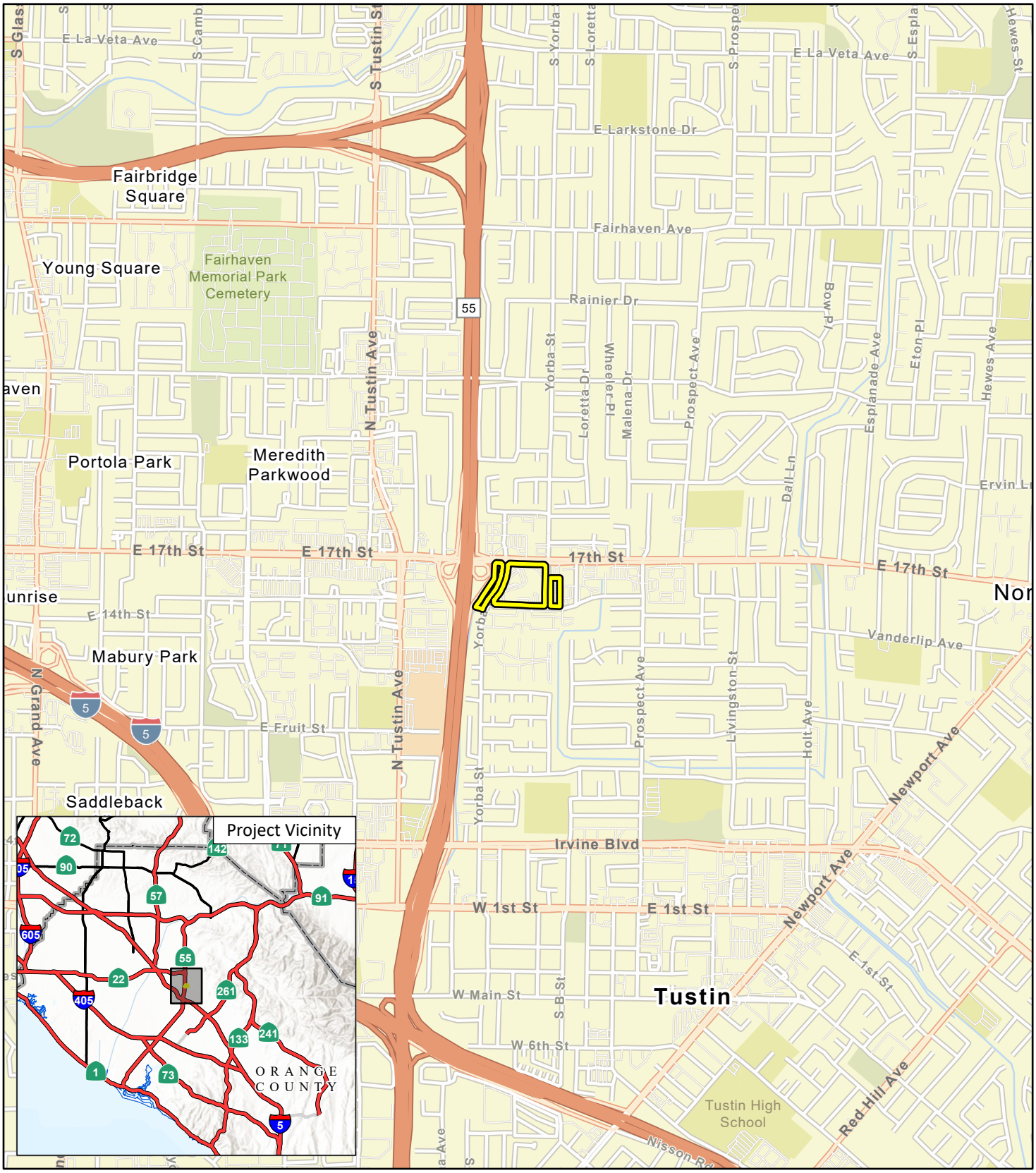
The Enderle Center is currently occupied with 87,136 square feet (sq ft) of commercial business uses, including 28,750 sq ft of restaurant use, 39,960 sq ft of retail and service use, 18,426 sq ft of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas. See Figure 2.

The project site has a General Plan land use designation of Planned Community Commercial/ Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The PCCB land use designation provides opportunities for a variety of miscellaneous retail, professional office, and service-oriented business activities. The PC COM zoning is intended to allow diversification of the relationships of various buildings, structures and open spaces in planned building groups while ensuring substantial compliance with the district regulations and other provisions of the Planned Community District zone.

PROJECT DESCRIPTION

The City of Tustin prepared the 2021–2029 Housing Element of the General Plan in accordance with Government Code Section 65580 et seq. The City is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The update to the Housing Element covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029.

[1] South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993) (accessed January 2024).



LSA

FIGURE 1

SOURCE: Esri World Street Map (2024)

J:\ESL2201.76\GIS\Pro\Enderle Center Project\Enderle Center Project.aprx (3/26/2024)

Enderle Center Project

Regional Project Location

LSA

Project Location

FIGURE 2

N

0 100 200
FEET

SOURCE: Google Maps (2023)

Enderle Center Project

Project Site

J:\ESL2201.76\GIS\Pro\Enderle Center Project\Enderle Center Project.aprx (3/26/2024)

The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA). During the Housing Element process, the City assessed a number of properties and areas throughout the community that would be able to accommodate the City's assigned RHNA. Of the Housing Element inventory sites, Enderle Center (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development.

Pursuant to Housing Element Program 1.1f, the City is proposing an overlay zone (overlay district) for the project site. To accommodate this, a General Plan Amendment (GPA) is needed to allow a Housing Overlay District (residential uses) within Planned Community Commercial/Business land use designations; a Zoning Code Amendment (ZCA) to establish Housing Overlay Districts (overlay zone) in conjunction with the Planned Community Commercial Districts (base zone); and a Zone Change (ZC) that amends the City's zoning map to apply a Housing Overlay District (HOD) to the project site. The proposed HOD would allow for residential development with a maximum density of 59 dwelling units per acre (du/ac) over a maximum development area of 7 acres.

The Housing Element identified the Enderle Center as having capacity for 413 housing units. The anticipated development density was determined through the Housing Element process and is a conservative estimate based on development trends in nearby communities. The anticipated development does not rely on the demolition of any existing building, but rather focuses on areas used for surface parking. No development is proposed as part of this project.

Residential uses are currently not allowed on the project site. Upon approval of the Housing Overlay Zone, the project site could accommodate 413 units over approximately 7 acres of developable land within the existing 11.8-acre site. The anticipated development over 7 acres would take place on underutilized asphalt parking lot areas, and not require demolition of any existing buildings. Parking displaced as a result of redevelopment would be accommodated by vertical parking structures located within the proposed development.

In addition, the project site is envisioned to function as a mixed-use site and a portion of the project site would remain as nonresidential land use. The project site is assumed to be developed with 205,603 sq ft of nonresidential use. As identified above, the Enderle Center is currently developed with 87,136 sq ft of commercial business uses, including 28,750 sq ft of restaurant use, 39,960 sq ft of retail and service use, and 18,426 sq ft of office use. Therefore, the total remaining nonresidential use assumed for future buildout of the project site is an additional 118,467 sq ft, including 39,087 sq ft of restaurant use, 54,328 sq ft of retail and service use, and 25,051 sq ft of office use.

Roadways and utilities may be required to support development of future residential construction within the project site. However, specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed.

The proposed project does not propose or approve any specific development projects. However, for the purposes of this analysis, future development of the additional 413 units and remaining

commercial buildout capacity associated with the proposed project could occur anytime between October 2024 and October 2029. Construction activities for the residential units would include demolition of the surface parking lot, site preparation, grading, building construction, paving, and architectural coatings.

The existing uses generate approximately 7,058 average daily trips (ADT).[2] With the buildout of the proposed housing units and remaining commercial buildout capacity, the proposed project would generate approximately 18,528 ADT, resulting in 11,470 net new ADT.

The residential units would be constructed in compliance with the version of the California Title 24 Energy Efficiency Standards (Title 24 energy standards) and the Title 24 California Green Building Standards Code (CALGreen Code) in effect at the time building permit applications are submitted.

EXISTING LAND USES IN THE PROJECT AREA

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. The project site is surrounded to the north by 17th Street followed by commercial, residential and office uses; to the east by Enderle Center Drive followed by office uses; to the south by Vandenberg Lane followed by residential uses; and to the west by Tustin city limits and SR-55 and restaurants and office uses.

The closest sensitive receptors to the project site are residential uses, located approximately 70 feet south of the project's site boundary.

[2] EPD Solutions, Inc. 2024. *Enderle Center Trip Generation*.

BACKGROUND

This section provides current background information on air pollutants and their health effects. It also provides current regulatory background information, including information from the California Air Resources Board's (CARB) Air Quality and Land Use Handbook[3] (CARB Handbook); a description of the general health risks of toxics, and the significance criteria for project evaluation. In addition, this section provides background information on energy usage in the project area and provides regulatory background information, including federal, State, and local energy regulations.

AIR POLLUTANTS AND HEALTH EFFECTS

Both State and federal governments have established health-based ambient air quality standards (California Ambient Air Quality Standards [CAAQS] and National Ambient Air Quality Standards [NAAQS], respectively) for six criteria air pollutants:[4] carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air district are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual project emissions, there is no known direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_X) and volatile organic compounds (VOCs).

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous outdoor work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses

[3] California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

[4] Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Ozone

Rather than being directly emitted, ozone (O_3 or smog) is formed by photochemical reactions between NO_X and VOCs. Ozone is a pungent, colorless gas. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Ozone levels peak during the summer and early fall months.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.

Particulate Matter

Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are 10 microns or less in diameter, or PM_{10}. Fine, suspended particulate matter with an aerodynamic diameter of 2.5 microns or less, or $PM_{2.5}$, is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $PM_{2.5}$. These small particles can be directly emitted into the atmosphere as byproducts of fuel combustion; through abrasion, such as tire or brake lining wear; or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead (Pb) released into the atmosphere. Lead has multiple adverse neurotoxic health effects, and children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, the United States Environmental Protection Agency (USEPA) strengthened the NAAQS for lead by lowering it from 1.5 to 0.15 micrograms per cubic meter ($\mu g/m^3$). The USEPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas, resulting in an increase in 76 monitors nationally.

Volatile Organic Compounds

Volatile organic compounds (VOCs) (also known as reactive organic gases [ROGs] and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, however, because VOCs accumulate in the atmosphere more quickly during the winter, when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and the CARB. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards (AAQS), but are regulated by the USEPA, the CARB, and the SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[5] High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter (DPM) is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as "on-road" sources such as trucks and buses traveling on freeways and local roadways.

[5] CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

Although not specifically monitored, recent studies indicate that exposure to DPM may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.[6] The technology for reducing DPM emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide DPM concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB's Diesel Risk Reduction Plan,[7] meaning that the statewide health risk from DPM is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. The CARB 2000 Diesel Risk Reduction Plan is still the most recent version and has not been updated.

Table A summarizes the sources and health effects of air pollutants discussed in this section. Table B presents a summary of CAAQS and NAAQS.

Table A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	● Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust ● Natural events, such as decomposition of organic matter	● Reduced tolerance for exercise ● Impairment of mental function ● Impairment of fetal development ● Death at high levels of exposure ● Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO_2)	● Motor vehicle exhaust ● High temperature stationary combustion ● Atmospheric reactions	● Aggravation of respiratory illness ● Reduced visibility ● Reduced plant growth ● Formation of acid rain
Ozone (O_3)	● Atmospheric reaction of organic gases with nitrogen oxides in sunlight	● Aggravation of respiratory and cardiovascular diseases ● Irritation of eyes ● Impairment of cardiopulmonary function ● Plant leaf injury
Lead (Pb)	● Contaminated soil	● Impairment of blood functions and nerve construction ● Behavioral and hearing problems in children
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	● Stationary combustion of solid fuels ● Construction activities ● Industrial processes ● Atmospheric chemical reactions	● Reduced lung function ● Aggravation of the effects of gaseous pollutants ● Aggravation of respiratory and cardiorespiratory diseases ● Increased cough and chest discomfort ● Soiling ● Reduced visibility
Sulfur Dioxide (SO_2)	● Combustion of sulfur-containing fossil fuels ● Smelting of sulfur-bearing metal ores Industrial processes	● Aggravation of respiratory diseases (asthma, emphysema) ● Reduced lung function ● Irritation of eyes ● Reduced visibility ● Plant injury ● Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board (2015).

6 CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

7 Ibid.

Table B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]		Federal Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
Ozone (O_3)[h]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[i]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[i]	24-Hour	-		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[j]	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	-	
Lead (Pb)[l,m]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average[i]	–		0.15 µg/m³		
Sulfur Dioxide (SO_2)[k]	24-Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)[k]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[k]	–	
Visibility-Reducing Particles[l]	8-Hour	See footnote n	Beta Attenuation and Transmittance through Filter Tape.	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[j]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: California Air Resources Board (2016) (Website: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf).

Table notes are provided on the following page.

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

[h] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24- hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[k] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[l] The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[m] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[n] In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
USEPA = United States Environmental Protection Agency

ENERGY

Electricity

Electricity is a manmade resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).

According to the most recent data available, in 2022, California's electricity was generated primarily by natural gas (47.5 percent), renewable sources (52.2 percent), large hydroelectric (7.2 percent), nuclear (8.7 percent), coal (<1.0 percent), and other unspecified sources. Total electric generation in California in 2022 was 287,220 gigawatt-hours (GWh), up 3.4 percent from the 2021 total generation of 277,764 GWh.[8]

The project site is within the service territory of Southern California Edison (SCE). SCE provides electricity to more than 15 million people in a 50,000-square-mile (sq mi) area of Central, Coastal, and Southern California.[9] According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2022 was 85,870 GWh (31,604 GWh for the residential sector and 54,266 GWh for the non-residential sector). Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kilowatt hours [kWh]), including 7,830 GWh for the residential sector and 12,414 GWh for the non-residential sector.[10]

Natural Gas

Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).

8 California Energy Commission (CEC). 2021a. *2020 Total System Electric Generation*. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation (accessed January 2024).

9 Southern California Edison (SCE). 2020. About Us. Website: https://www.sce.com/about-us/who-we-are (accessed January 2024).

10 CEC. 2023. Electricity Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx and http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed January 2024).

Natural gas consumed in California is used for electricity generation (45 percent), residential uses (21 percent), industrial uses (25 percent), and commercial uses (9 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.[11]

The Southern California Gas Company (SoCalGas) is the natural gas service provider for the project site. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000 sq mi service area throughout Central and Southern California, from Visalia to the Mexican border.[12] According to the CEC, total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms (2,230 million therms for the residential sector). Total natural gas consumption in Orange County in 2021 was 573 million therms (572,454,744 therms), including 352 million therms for the residential sector and 221 million therms for the non-residential sector.[13]

Fuel

Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil, gasoline, and diesel.

The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.9 mpg in 2021.[14] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. This act, which originally mandated a national fuel economy standard of 35 mpg by year 2020[15], applies to cars and light trucks of Model Years 2011 through 2020. In March 2020, the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks, further detailed below.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, in 2021, total gasoline consumption in California was 289,918 thousand barrels

11 CEC. 2021b. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california (accessed January 2024).

12 Southern California Gas Company (SoCalGas). 2020. About SoCalGas. Website: https://www3.socalgas.com/about-us/company-profile (accessed January 2024).

13 CEC. 2023. Gas Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx and http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed January 2024).

14 U.S. Department of Transportation (USDOT). "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: https://www.bts.dot.gov/bts/bts/content/average-fuel-efficiency-us-light-duty-vehicles (accessed January 2024).

15 U.S. Department of Energy. 2007. "Energy Independence & Security Act of 2007." Website: https://www.afdc.energy.gov/laws/eisa (accessed January 2024).

(12.2 billion gallons) or 1,464.7 trillion British Thermal Units (BTU).[16] Of the total gasoline consumption, 273,289 thousand barrels (11.5 billion gallons) or 1,380.7 trillion BTU were consumed for transportation.[17] Based on fuel consumption obtained from CARB's California Emissions Factor Model, Version 2021 (EMFAC2021), approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024..

GREENHOUSE GASES

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°F) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[18]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- CO_2
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is

16 U.S. Energy Information Administration (EIA). 2022. California State Profile and Energy Estimates, Data. Website: www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed January 2024).

17 Ibid.

18 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively to the six gases listed above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table C shows the GWP for each type of GHG. For example, SF_6 is 23,900 times more potent at contributing to global warming than CO_2.

Table C: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-Year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	310
HFC-23	270	11,700
HFC-134a	14	140
HFC-152a	1.4	140
PFC: Tetrafluoromethane (CF_4)	50,000	6,500
PFC: Hexafluoromethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: *Second Update to the Climate Change Scoping Plan: Building on the Framework* (CARB 2017). Website: www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents (accessed January 2024).
HFC = hydrofluorocarbons
PFC = perfluorocarbons

The following discussion summarizes the characteristics of the six GHGs and black carbon.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as carbon dioxide (CO_2). Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of manmade emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of manmade CO_2, and consequently, the gas is building up in the atmosphere.

In 2021, total annual CO_2 accounted for approximately 81.2 percent of California's overall GHG emissions.[19] Transportation is the single largest source of CO_2 in California, which is primarily comprised of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane

Methane (CH_4) is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for approximately 9.8 percent of GHG emissions in California in 2021.[20]

Nitrous Oxide

Nitrous oxide (N_2O) is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. Nitrous oxide emissions accounted for approximately 3.4 percent of GHG emissions in California in 2021.[21]

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[22] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5.6 percent of GHG emissions in California in 2021.[23]

Black Carbon

Black carbon is the most strongly light-absorbing component of PM formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of $PM_{2.5}$ and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in

19 CARB. 2022. *GHGs Descriptions & Sources in California*. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed January 2024).

20 Ibid.

21 Ibid.

22 The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

23 CARB. 2022. op. cit.

the atmosphere, black carbon can absorb one million times more energy than CO_2.[24] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. The CARB estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030.[25]

[24] U.S. Environmental Protection Agency (USEPA). 2015. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed January 2024).

[25] CARB. 2017b. *Short-Lived Climate Pollutant Reduction Strategy.* March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed January 2024).

REGULATORY SETTING

AIR QUALITY REGULATIONS

The USEPA and the CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

Federal Regulations

Federal Clean Air Act

The 1970 federal Clean Air Act (CAA) authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

State Regulations

California Clean Air Act

In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain CAAQS for CO, O_3, SO_2, and NO_2 by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

California Air Resources Board

The CARB is the State's "clean air agency." The CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

Assembly Bill 2588 Air Toxics "Hot Spots" Information and Assessment Act. Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances their facilities routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook. The CARB has developed an Air Quality and Land Use Handbook[26] which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land uses that can produce air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to help land use agencies determine when to further examine project sites for actual health risk associated with the location of new sensitive land uses.

Regional Regulations

South Coast Air Quality Management District

The SCAQMD has jurisdiction over most air quality matters in the South Coast Air Basin (Basin). This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of

[26] CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

Riverside County. The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin and is tasked with implementing certain programs and regulations required by the CAA and the CCAA. The SCAQMD prepares plans to attain CAAQS and NAAQS. SCAQMD is directly responsible for reducing emissions from stationary (area and point) sources. The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures though educational programs or fines, when necessary.

The proposed project could be subject to the following SCAQMD rules and regulations:[27]

- **Regulation IV - Prohibitions:** This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air pollutant emissions, fuel contaminants, start-up/shutdown exemptions, and breakdown events.
    - **Rule 402 - Nuisance:** This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance, or annoyance to businesses, property, or the public.
    - **Rule 403 - Fugitive Dust:** This rule requires the prevention, reduction, or mitigation of fugitive dust emissions from a project site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM_{10} emissions to less than 50 µg/m^3 and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to utilize one or more of the best available control measures (identified in the tables within the rule). Control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, Rule 403 requires that a contingency plan be prepared if so determined by the USEPA. In addition, SCAQMD Rule 403(e), Additional Requirements for Large Operations, includes requirements to provide Large Operation Notification Form 403 N, appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control training class in the South Coast Air Basin.
- **Regulation XI - Source Specific Standards:** Regulation XI sets emissions standards for different sources.
    - **Rule 1113 - Architectural Coatings:** This rule limits the amount of VOCs from architectural coatings and solvents, which lowers the emissions of odorous compounds.

The SCAQMD is responsible for demonstrating regional compliance with AAQS but has limited indirect involvement in reducing emissions from fugitive, mobile, and natural sources. To that end, the SCAQMD works cooperatively with the CARB, the Southern California Association of Governments (SCAG), county transportation commissions, local governments, and other federal and State government agencies. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs) to meet CAAQS and NAAQS. SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring

[27] SCAQMD. 2024. South Coast AQMD Rule Book. Website: https://www.aqmd.gov/home/rules-compliance/rules (accessed January 2024).

the area into compliance with federal and State air quality standards. Every 3 years, SCAQMD prepares a new AQMP, updating the previous plan and 20-year horizon.[28]

The Final 2022 Air Quality Management Plan is the currently adopted AQMP. Key elements of the Final 2022 AQMP include the following:

- Calculating and taking credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)
- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives
- Seeking new partnerships and significant funding for incentives to accelerate deployment of zero-emission and near-zero emission technologies
- Enhanced socioeconomic assessment, including an expanded environmental justice analysis
- Attainment of the 24-hour $PM_{2.5}$ standard in 2019 with no additional measures
- Attainment of the annual $PM_{2.5}$ standard by 2025 with implementation of a portion of the O_3 strategy
- Attainment of the 1-hour O_3 standard by 2022 with no reliance on "black box" future technology (CAA Section 182(e)(5) measures)

The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_X technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 8-hour ozone standard.

Southern California Association of Governments

SCAG is a council of governments for Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. It is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy and community development, and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG prepares the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP), which address regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air

[28] SCAQMD. 2022. *Final 2022 Air Quality Management Plan*. December 2.

quality forecasts and consistency analysis included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within local jurisdictions.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's Regional Comprehensive Plan (RCP) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the SCAQMD. The RCP is a framework for decision-making for local governments, assisting them in meeting federal and State mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes. Policies within the RCP include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

SCAG adopted the Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal 2024)[29] on April 4, 2024. Connect SoCal 2024 is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal is an important planning document for the region, allowing project sponsors to qualify for federal funding and takes into account operations and maintenance costs, to ensure reliability, longevity, and cost effectiveness. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in Connect SoCal 2024, would reach the GHG emissions reduction target set by CARB, including the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels).

Local Regulations

City of Tustin General Plan

The City of Tustin addresses air quality in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan.[30] The Conservation, Open Space, and Recreation Element contains policies that work to improve air quality and reduce particulate emissions. The following policies are applicable to the proposed project:

- **Policy 1.1:** Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.

- **Policy 1.2:** Design safe and efficient vehicular access to commercial land uses from arterial streets to insure efficient vehicular ingress and egress.

[29] Southern California Association of Governments (SCAG). 2024. Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete-040424.pdf?1712261565 (accessed April 2024).

[30] City of Tustin. 2017. *City of Tustin General Plan*. July.

- **Policy 1.3:** Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.
- **Policy 1.7:** Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.
- **Policy 2.1:** Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.
- **Policy 2.2:** Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.
- **Policy 2.6:** Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.
- **Policy 2.7:** Encourage employer rideshare and transit incentives programs by local businesses.
- **Policy 2.8:** Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

ENERGY REGULATORY SETTING

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation (USDOT), the United States Department of Energy, and the USEPA are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

The CEC is the State's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources, and plans for/directs state response to energy emergencies. The applicable federal, State, regional, and local regulatory framework is discussed below.

Federal Regulations

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Corporate Average Fuel Economy (CAFE) Standards

On March 31, 2022, the National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

State Regulations

Assembly Bill 1575, Warren-Alquist Act

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting

In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies

a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2023 Integrated Energy Policy Report.*[31] The *Integrated Energy Policy Report* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewable Portfolio Standard

SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all the State's electricity come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[32]

Title 24, California Building Code

Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, with the most recent update consisting of the 2022 CBC that became effective January 1, 2023. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

---

31 CEC. 2023. *2023 Integrated Energy Policy Report*. California Energy Commission. Docket Number: 23-IEPR-01.

32 California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (accessed January 2024).

California Green Building Standards Code (CALGreen Code)

In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2022 CALGreen Code standards that became effective January 1, 2023. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan

On September 18, 2008, the CPUC adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The Plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

Regional Regulations

There are no regional regulations that apply to the proposed project.

Local Regulations

City of Tustin General Plan

The City of Tustin addresses energy in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan.[33] The Conservation, Open Space, and Recreation Element contains policies that work to reduce energy consumption. The following policies are applicable to the proposed project:

- **Policy 4.1:** Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

[33] City of Tustin. 2017. op. cit.

- **Policy 4.2:** Promote local recycling of wastes and the use of recycled materials.

GREENHOUSE GAS REGULATORY SETTING

This section describes regulations related to GHGs at the federal, State, and local level.

Federal Regulations

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the USEPA has the authority to regulate CO_2 emissions under the CAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

In October 2012, the USEPA and the NHTSA, on behalf of the U.S. Department of Transportation, issued final rules to further reduce GHG emissions and improve CAFE standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg), limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 *Federal Register* 62630).

On March 31, 2022, the NHTSA finalized the CAFE standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002)

In a response to the transportation sector's significant contribution to California's CO_2 emissions, AB 1493 was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial

personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of CCAA Preemption was not granted by the USEPA until June 30, 2009. The CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025. The Trump administration revoked California's waiver in 2019; however, the Biden administration restored California's waiver in 2021.

Executive Order S-3-05 (2005)

Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies in order to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads this Climate Action Team (CAT) made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and the Legislature was released in March 2006, which it laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the executive order. The most recent report was released in December 2020.

Assembly Bill 32 (2006), California Global Warming Solutions Act

California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 169 MMT CO_2e, or approximately 30 percent, from the State's projected 2020

emissions level of 596 MMT CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e).

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[34] to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

Most recently, the 2022 Scoping Plan[35] was approved in December 2022 and assesses progress towards achieving the SB 32 2030 target and lay out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 97 (2007)

SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code [PRC], Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in November 2018, which went into effect in December 2018. The amendments do not identify a

34 CARB. 2017a. *California's 2017 Climate Change Scoping Plan*. November.

35 CARB. 2021. *2022 Scoping Plan Update*. May 10. Website: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf (accessed January 2024).

threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008)

SB 375, the Sustainable Communities and Climate Protection Act, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. On September 23, 2010, the CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the Metropolitan Planning Organization (MPOs); the targets require a 6 to 15 percent reduction by 2020 and between 13 to 19 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs such as the Fresno Council of Governments will work with local jurisdictions in the development of Sustainable Communities Strategy (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. Pursuant to SB 375, the Los Angeles/Southern California reduction targets for per capita vehicular emissions were 8 percent by 2020 and are 19 percent by 2035 as shown in Table D.

Table D: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (percent)	By 2035 (percent)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6–13	13–16
Los Angeles/Southern California	8	19

Source: California Air Resources Board (2018).

Executive Order B-30-15 (2015)

Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act

SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the CPUC for the private utilities and by the CEC for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires State energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197

In summer 2016 the Legislature passed, and the Governor signed, SB 32, and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change (IPCC) analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which raises California's Renewables Portfolio Standard (RPS) requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18

EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon

neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279

AB 1279 was signed in September of 2022, and codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter. This bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045 and directs CARB to work with relevant state agencies to achieve these goals.

Title 24, Part 11, Building Standards Code and CALGreen Code

In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen Code), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is updated every 3 years and was most recently updated in 2022 to include new mandatory measures for residential as well as non-residential uses; the new measures took effect on January 1, 2023.

California Building Efficiency Standards (Title 24, Part 6)

The California Building Standards Code, or Title 24 of the California Code of Regulations (CCR) contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. The current set of standards was adopted in 2022 and applies to projects seeking building permits on or after January 1, 2023. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Cap and Trade

The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. The cap-and-trade emissions trading program developed by the CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the State by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap was set in 2013 at approximately 2 percent below the emissions forecast for 2020. In 2014, the cap declined approximately 2 percent. Beginning in 2015 and continuing through

2020, the cap has been declining approximately 3 percent annually. The CARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities. On January 1, 2015, compliance obligation began for distributors of transportation fuels, natural gas, and other fuels. The cap-and-trade program was initially slated to sunset in 2020 but the passage of SB 398 in 2017 extended the program through 2030.

Executive Order N-79-20

EO N-79-20, which was signed by the Governor on September 23, 2020, sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

Low Carbon Fuel Standard

In January 2007, EO S-01-07 established a Low Carbon Fuel Standard (LCFS). This executive order calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, and that an LCFS for transportation fuels be established for California. The LCFS applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. In June 2007, CARB adopted the LCFS under AB 32 pursuant to Health and Safety Code Section 38560.5, and, in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the "deficits" earned from selling higher intensity fuels. In response to certain court rulings, CARB re-adopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016. In 2018, CARB approved amendments to the regulation to readjust carbon intensity benchmarks to meet California's 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017 through 2025. The new regulations strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's ZEVs regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of

zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the State. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 40 percent fewer GHGs and 75 percent fewer smog-forming emissions than 2012 model year vehicles.

Executive Order B-48-18

In January 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS program, and recommend how to ensure affordability and accessibility for all drivers.

Regional Regulations

South Coast Air Quality Management District

In 2008, the SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the Basin. The Working Group developed several different options that are contained in the SCAQMD 2008 draft guidance document titled, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans,*[36] that could be applied by lead agencies. On September 28, 2010, SCAQMD Working Group Meeting No. 15 provided further guidance, including a tiered approach for evaluating GHG emissions for development projects where the SCAQMD is not the lead agency. The SCAQMD has not presented a finalized version of these thresholds to the governing board.

The SCAQMD identifies the emissions level for which a project would not be expected to substantially conflict with any State legislation adopted to reduce statewide GHG emissions. As such, the utilization of a service population represents the rates of emissions needed to achieve a fair share of the State's mandated emissions reductions. Overall, the SCAQMD identifies a GHG efficiency level that, when applied statewide or to a defined geographic area, would meet the year 2020 and post-2020 emissions targets as required by AB 32 and SB 32. If projects are able to achieve targeted rates of emissions per the service population, the State will be able to accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target and future post-2020 targets.

[36] SCAQMD. 2008b. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans*.

Southern California Association of Governments

On April 4, 2024, SCAG adopted Connect SoCal 2024.[37] In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled (VMT) from automobiles and light-duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, CARB has set GHG reduction targets at 8 percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. The 2024–2050 RTP/SCS lays out a strategy for the region to meet these targets. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high-quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles.[38] However, the SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the SCS; SCAG is required to consider local land use controls when drafting the SCS.

The horizon year for Connect SoCal 2024 is 2050 and the plan projects that by 2050, 66 percent of new households and 54 percent of new jobs will be located in Priority Development Areas, either near transit or in walkable communities. The objectives of Connect SoCal 2024 are to create a region with: transit as a backbone of the transportation system; more Complete Streets where people and safety are prioritized; policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; more housing to address the existing housing need as defined by the RHNA; safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies.

Local Regulations

City of Tustin

The City of Tustin has not prepared a Climate Action Plan. The air quality and energy policies from the City of Tustin General Plan, identified above, would also work to reduce GHG emissions.

37 SCAG. 2024. op. cit.

38 Ibid.

SETTING

This section provides the current SCAQMD attainment status, climate and air quality, ambient air quality monitoring results, and GHG emissions inventory.

ATTAINMENT STATUS

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as either does not meet the primary standards, or cannot be classified, or better than national standards. For SO_2, areas are designated as does not meet the primary standards, does not meet the secondary standards, cannot be classified, or better than national standards.

Table E provides a summary of the attainment status for the Basin with respect to NAAQS and CAAQS.

Table E: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1 hour	Nonattainment	Extreme Nonattainment
O_3 8 hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	N/A	Attainment/Unclassified
Lead	Attainment	Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: South Coast Air Quality Management District (2018).
[1] Except in Los Angeles County.
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide

EXISTING CLIMATE AND AIR QUALITY

Air quality in the planning area is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from

the second-largest urban area in the United States gives the Basin some of the worst air pollution in the nation.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s°F. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Tustin Irvine Ranch Station.[39] The monthly average maximum temperature recorded at this station ranged from 66.8°F in January to 85.2°F in August, with an annual average maximum of 75.4°F. The monthly average minimum temperature recorded at this station ranged from 40.2°F in January to 59.1°F in August, with an annual average minimum of 49.4°F. These levels are representative of the project area.

The majority of annual rainfall in the Basin occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. Average monthly rainfall at the Tustin Irvine Ranch Station varied from 0.01 inch in July to 2.67 inches in February, with an annual total of 12.86 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the air appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north, or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog. Smog is a general term that is naturally occurring fog that has become mixed with smoke or pollution. In this context it is better described as a form of air pollution

[39] Western Regional Climate Center. Recent Climate in the West. Website: http://www.wrcc.dri.edu, (accessed January 2024).

produced by the photochemical reaction of sunlight with pollutants that have been released into the atmosphere, especially by automotive emissions.

AIR QUALITY MONITORING RESULTS

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring stations closest to the project site is located at 1630 Pampas Lane in Anaheim.

Pollutant monitoring results for years 2020 to 2022 at the Anaheim ambient air quality monitoring stations, shown in Table F, indicate that air quality in the area has generally been moderate. As indicated in the monitoring results, the federal PM_{10} standard was not exceeded during the 3-year period. The State PM_{10} standard was exceeded 5 times in 2020, once in 2021, and once in 2022. Similarly, the federal $PM_{2.5}$ standard had 12 exceedances in 2020, 10 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standards were exceeded 6 times in 2021, no times in 2021, and once in 2022. The State 8-hour ozone standards were exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standards were exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO_2 standards were not exceeded in this area during the 3-year period. SO_2 data were not available from 2020 to 022 at air quality monitoring stations in Orange County.

GREENHOUSE GAS EMISSIONS INVENTORY

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

Global Emissions

Worldwide emissions of GHGs in 2020 totaled 22.9 billion metric tons (MT) of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[40]

United States Emissions

In 2021, the year for which the most recent data are available, the United States emitted about 5,586.0 million metric tons of CO_2e (MMT CO_2e) after accounting for sequestration from the land sector. Overall, emissions in 2021 increased by 6 percent since and were 17 percent lower than 2005 levels. The increase in total GHG emissions was driven by an increase in CO_2 emissions from fossil fuel combustion.

[40] United Nations Framework Convention on Climate Change (UNFCCC). 2021. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed January 2024).

Table F: Ambient Air Quality at the Nearby Monitoring Stations

Pollutant	Standard	2020	2021	2022
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		2.3	2.1	2.4
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.7	1.5	1.4
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.142	0.089	0.102
Number of days exceeded:	State: > 0.09 ppm	6	0	1
Maximum 8-hour concentration (ppm)		0.098	0.068	0.077
Number of days exceeded:	State: > 0.07 ppm	16	0	1
	Federal: > 0.07 ppm	15	0	1
Coarse Particulates (PM_{10})				
Maximum 24-hour concentration (µg/m^3)		74.8	63.6	67.0
Number of days exceeded:	State: > 50 µg/m^3	5	1	1
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		30.8	23.4	20.9
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
	Federal: > 50 µg/m^3	No	No	No
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration (µg/m^3)		64.8	54.4	33.1
Number of days exceeded:	Federal: > 35 µg/m^3	12	10	0
Annual arithmetic average concentration (µg/m^3)		12.4	11.6	9.9
Exceeded for the year:	State: > 12 µg/m^3	Yes	No	No
	Federal: > 15 µg/m^3	No	No	No
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.071	0.067	0.053
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.013	0.012	0.012
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)				
Maximum 1-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.25 ppm	ND	ND	ND
Maximum 24-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.04 ppm	ND	ND	ND
	Federal: > 0.14 ppm	ND	ND	ND
Annual arithmetic average concentration (ppm)		ND	ND	ND
Exceeded for the year:	Federal: > 0.030 ppm	ND	ND	ND

Sources: CARB (2023) and USEPA (2023).
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
ND = No data. There were insufficient (or no) data to determine the value.
ppm = parts per million
USEPA = United States Environmental Protection Agency

In 2021, CO_2 emissions from fossil fuel combustion increased by 7 percent relative to the previous year. This increase in fossil fuel consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic. Of the five major sectors—residential and commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2021 (approximately 28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.[41]

State of California Emissions

The State emitted approximately 381.3 MMT CO_2e emissions in 2021, 12.1 MMT CO_2e higher than 2020 levels and 49.7 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e.[42] CARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at approximately 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high GWP at 6 percent, and waste at 2 percent.[43]

41 USEPA. 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021. Website: https://www.epa.gov/system/files/documents/2023-04/US-GHG-Inventory-2023-Main-Text.pdf (accessed January 2024).

42 CARB. 2023. *California Greenhouse Gas Emissions for 2000 to 2021, Trends of Emissions and Other Indicators Report*. Website: https://ww2.arb.ca.gov/sites/default/files/2023-12/2000_2021_ghg_inventory_trends.pdf (accessed January 2024).

43 Ibid.

METHODOLOGY

The methodology used to estimate air quality, energy use, and GHG impacts is described below.

CONSTRUCTION EMISSIONS

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include demolition, site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips.

The California Emissions Estimator Model version 2022.1 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. Information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 413 units and remaining commercial buildout capacity associated with the proposed project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities. The proposed project would demolish the existing surface parking, but would not demolish any existing buildings. This analysis also assumes that the proposed project would comply with SCAQMD Rule 403 measures. In addition, this analysis assumes the use of Tier 2 construction equipment, which was also included in CalEEMod. All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used.

OPERATIONAL EMISSIONS

The air quality analysis includes estimating emissions associated with long-term operation of the proposed project. Consistent with the SCAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project.

This analysis evaluates the buildout of 413 units and remaining commercial buildout capacity within the project site and compares the potential impacts to impacts associated with the existing commercial uses as determined based on two CalEEMod runs.

As identified in the Project Description, the existing uses that were modeled consists of the Enderle Center that is currently developed with 87,136 sq ft of commercial business uses, including 28,750 sq ft of restaurant use, 39,960 sq ft of retail and service use, and 18,426 sq ft of office use. The analysis was conducted using land use codes *High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, and *Parking Lot*. Trip generation rates used in CalEEMod for the existing uses were based on the trip generation rate of 7,058 ADT.

The analysis of the future buildout of the project site included the existing development, the buildout of 413 units, and the addition of the total remaining nonresidential use including a total of 67,837 sq ft of restaurant use, 94,288 sq ft of retail and service use, and 43,477 sq ft of office use. The analysis was conducted using land use codes *Apartments Mid Rise*, *High Turnover (Sit Down Restaurant), Strip Mall,* and *General Office Building* assuming a total trip generation of 18,528 ADT. This analysis also assumes that the proposed project would not include any woodburning hearths or wood stoves. Where project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate project emissions.

ENERGY USE

The analysis of electricity/natural gas usage is based on the CalEEMod modeling conducted by LSA, which quantifies energy use for project operations. Fuel consumption (diesel fuel and gasoline) from vehicle trips during operation was conservatively estimated for the year 2024 of the proposed project based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMission FACtor Model (EMFAC2021) model. Estimates of fuel consumption (diesel fuel and gasoline) from construction trucks and construction worker vehicles were based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMFAC2021 model.

The analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, the equipment fuel necessary for project construction, and vehicle fuel necessary for project operations. For the purposes of this analysis, the amount of electricity, construction fuel, and fuel use from operations are quantified and compared to that consumed in Orange County. The electricity use of the proposed project is analyzed as a whole on an annual basis. Electricity use was estimated for the project using default energy intensities by land use type in CalEEMod.

GREENHOUSE GAS ANALYSIS

Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the project area. The CalEEMod results were used to quantify GHG emissions generated by the project.

THRESHOLDS OF SIGNIFICANCE

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under applicable federal or State ambient air quality standards;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) affecting a substantial number of people.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse energy impact if the project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse greenhouse gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analysis. The SCAQMD's current guidelines, its *CEQA Air Quality Handbook* with associated updates, were followed in this assessment of air quality and GHG impacts for the proposed project.

CRITERIA POLLUTANT THRESHOLDS

SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Table G lists the CEQA significance thresholds for construction and operational emissions established for the Basin. Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and that apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

Table G: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Threshold (lbs/day)					
	VOCs	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: SCAQMD. Air Quality Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed January 2024).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

LOCALIZED IMPACTS ANALYSIS

The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008, recommending that all air quality analyses include an assessment of air quality impacts to nearby sensitive receptors.[44] This guidance was used to analyze potential localized air quality impacts associated with construction of the proposed project. Localized significance thresholds (LST) are developed based on the size or total area of the emission source, the ambient air quality in the source receptor area, and the distance to the project. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality.

LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For the proposed project, the appropriate SRA for the LST is the nearby Central Orange County (SRA 17). SCAQMD provides LST screening tables for 25, 50, 100, 200, and 500-meter source-receptor distances. As identified above, the closest sensitive receptors to the project site include residential uses, located approximately 70 feet south of the project's site boundary. In cases where receptors may be closer than 82 feet (25 meters), any distances within the 82-foot (25-meter) buffer zone can be used. As such, the minimum distance of 25 meters was used. Based on the anticipated construction equipment, it is assumed that the maximum daily disturbed acreage during construction would be 3.5 acres.[45] The 5-acre thresholds were used for project operation. Table H lists the emissions thresholds that apply during project construction and operation.

44 SCAQMD. 2008a. *Final Localized Significance Threshold Methodology*. July.

45 SCAQMD. n.d. *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf (accessed February 2024).

Table H: South Coast Air Quality Management District Localized Significance Thresholds

Emissions Source	Pollutant Emissions Threshold (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Construction	149.0	984.0	9.5	5.5
Operations	183.0	1,253.0	3.0	2.0

Source: South Coast Air Quality Management District (2008).
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

LOCAL MICROSCALE CONCENTRATION STANDARDS

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

GREENHOUSE GAS THRESHOLD

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- **Tier 1. Exemptions:** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2. Consistency with a locally adopted GHG Reduction Plan:** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3. Numerical Screening Threshold:** If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. The 10,000 MT of CO_2e per year (MT CO_2e/yr) threshold for industrial uses would be recommended for use by all lead agencies. Under Option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e/yr), commercial projects (1,400 MT CO_2e/yr), and mixed-use projects (3,000 MT CO_2e/yr).

Under Option 2, a single numerical screening-level threshold of 3,000 MT CO_2e/yr would be used for all non-industrial projects.

- **Tier 4. Performance Standards:** If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT CO_2e/yr per service population (for project-level analyses and 6.6 MT CO_2e/yr per service population for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

  Rate of Emission: GHG Emissions (MT CO_2e/yr) ÷ Service Population

  The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

  Relative to the 2035 target date, this target date was selected to be consistent with the GHG reduction target date of SB 375. Overall, GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. This 40 percent reduction was applied to the 2020 targets, resulting in an efficiency threshold for plans of 4.1 MT CO_2e/yr and an efficiency threshold at the project level of 3.0 MT CO_2e/yr.

For the purpose of this analysis, the proposed project will first be compared to the SCAQMD screening-level Tier 3 Numerical Screening Threshold of 3,000 MT CO_2e/yr for all land use type projects. If it is determined that the proposed project is estimated to exceed this numerical threshold, it will then be compared to the SCAQMD-recommended 2035 efficiency-based plan-level threshold of 4.1 MT CO_2e/yr per service population. In addition, the proposed project is also evaluated for compliance with the 2022 Scoping Plan and the 2024–2050 RTP/SCS.

IMPACTS ANALYSIS

This section identifies the air quality, energy, and GHG emissions impacts associated with implementation of the proposed project.

AIR QUALITY IMPACTS

Air pollutant emissions associated with the project would occur over the short term from construction activities and over the long term from operational activities associated with the proposed land uses.

Consistency with Applicable Air Quality Plans

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

Consistency with the 2022 AQMP would be achieved if the project is consistent with the goals, objectives, and assumptions in this plan to achieve the federal and State air quality standards. Per SCAQMD's *CEQA Air Quality Handbook*, there are two main indicators of a project's consistency with the AQMP:

- **Indicator 1:** Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or emission reductions in the AQMP.

- **Indicator 2:** Whether the project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

Indicator 1: As demonstrated below, the regional emissions generated by construction and operation of the proposed project would be less than the SCAQMD emissions thresholds. As such, the proposed project would not be consistent with Indicator 1.

Indicator 2: The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities.

The proposed project includes a GPA to amend the City's existing General Plan to create a Housing Overlay Zone. The proposed project would not directly result in physical development but upon

approval of the Housing Overlay Zone, the project site could accommodate 413 units. As such, this analysis evaluates whether the project would exceed the 2022 AQMP's assumptions.

With respect to determining the proposed project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2024–2050 RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024–2050 RTP/SCS, in 2019, the City's population was 80,400 residents and the City had 27,000 households and 51,700 jobs. Households are forecast to increase by approximately 6,800 households by 2035 and 7,000 households by 2050 and employment are forecast to increase by approximately 14,600 jobs by 2035 and 19,600 jobs by 2050.[46]

As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, Enderle Center (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. The proposed project would accommodate up to 413 housing units to help the City meet its RHNA allocation.

The development of 413 housing units would result in approximately 1,189 additional residents based on the estimated 2.88 persons per household[47] in Tustin. Future development implemented in accordance with the proposed Housing Overlay Zone would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the General Plan. Therefore, since the purpose of the proposed project is to accommodate planned regional housing growth included in the SCAG RHNA, the proposed project would not exceed the growth assumptions in the SCAG's 2024–2050 RTP/SCS or the AQMP.

In addition, the proposed project would not include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, it is unlikely that the proposed project would interfere with SCAQMD's goals for improving air quality in the region. The proposed project would not conflict with the 2022 AQMP and, as such, would not jeopardize attainment of the CAAQS and NAAQS in the area under the jurisdiction of the SCAQMD. The proposed project is therefore considered consistent with Indicator 2.

Summary: Based on the discussion above, the proposed project would not conflict or obstruct implementation of applicable air quality plans under Indicator 1 because the proposed project would result in pollutant emissions below the SCAQMD's thresholds. As such, based on the

46 Southern California Association of Governments (SCAG). 2024. *Connect SoCal 2024 Demographics & Growth Forecast.* Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-tr-demographics-growth-forecast-final-040424.pdf?1712261839 (accessed May 2024).

47 State of California, Department of Finance. 2023. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change*. May.

consistency analysis presented above, the proposed project would be consistent with the regional AQMP.

Criteria Pollutant Analysis

The Basin is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The following analysis assesses the potential project-level construction- and operation-related air quality impacts.

Construction Emissions

It is important to note that the proposed project would not, in and of itself entitle, propose, or otherwise require the construction of new development. The proposed project would create a Housing Overlay Zone that would accommodate 413 units.

Construction activities associated with the construction of additional housing units and remaining commercial buildout capacity that could occur with implementation of the project would be through the horizon year 2029, which would cause short-term emissions of criteria air pollutants. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include demolition, site preparation, grading, building construction, architectural coating, and paving activities. Construction-related effects on air quality are typically greatest during the grading phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at construction sites. Unless properly controlled, vehicles leaving construction sites would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403 (Fugitive Dust), which would require the contractor to implement measures that would reduce the amount of particulate matter generated during the construction period.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_X, VOCs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for development envisioned under the proposed project using CalEEMod. As described in the Methodology section above, information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 413 units and remaining commercial buildout capacity associated with the proposed project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod. Table I lists the tentative schedule, and Table J lists the potential construction equipment to be used during project construction under each phase of construction. Construction-related emissions are presented in Table K. CalEEMod output sheets are included in Appendix A.

Table I: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	10/7/2024	11/4/2024	5	20
2	Site Preparation	11/5/2024	11/19/2024	5	10
3	Grading	11/20/2024	1/1/2025	5	30
4	Building Construction	1/2/2025	2/26/2026	5	300
5	Paving	2/27/2026	3/27/2026	5	20
6	Architectural Coating	12/8/2025	4/25/2026	5	100

Source: Compiled by LSA assuming construction would start October 2024 with a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities (March 2024).
CalEEMod = California Emissions Estimator Model

Table J: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	33	0.73
	Excavators	3	8	36	0.38
	Rubber Tired Dozers	2	8	367	0.4
Site Preparation	Rubber Tired Dozers	3	8	367	0.4
	Tractors/Loaders/Backhoes	4	8	84	0.37
Grading	Excavators	2	8	36	0.38
	Graders	1	8	148	0.41
	Rubber Tired Dozers	1	8	367	0.4
	Scrapers	2	8	423	0.48
	Tractors/Loaders/Backhoes	2	8	84	0.37
Building Construction	Cranes	1	7	367	0.29
	Forklifts	3	8	82	0.2
	Generator Sets	1	8	14	0.74
	Tractors/Loaders/Backhoes	3	7	84	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	81	0.42
	Paving Equipment	2	8	89	0.36
	Rollers	2	8	36	0.38
Architectural Coating	Air Compressors	1	6	37	0.48

Source: Compiled by LSA using CalEEMod defaults (March 2024).
CalEEMod = California Emissions Estimator Model

Table K: Project Construction Emissions

Project Construction	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2024	1.4	48.9	36.4	0.1	11.2	5.0
2025	38.0	48.9	36.3	0.1	6.6	2.7
2026	37.9	23.5	34.8	<0.1	6.6	2.1
Maximum Daily Emissions	**37.9**	**48.9**	**36.4**	**0.1**	**11.2**	**5.0**
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2024).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in Table I, construction emissions associated with future development, as envisioned under the proposed project would not exceed the SCAQMD thresholds for VOCs, NO_X, CO, sulfur oxides (SO_X), $PM_{2.5,}$ or PM_{10} emissions. The proposed project would be required to comply with SCAQMD Rule 403: Fugitive Dust, which would further reduce construction-related emissions. Therefore, future construction of development projects consistent with the proposed project would not result in emissions that would result in a cumulatively considerable net increase of any criteria

pollutant for which the project is in nonattainment under an applicable federal or State ambient air quality standard.

Operational Air Quality Impacts

Operational activities associated with the additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the proposed project would result in long-term air pollutant emissions associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment). Before development can take place, a project will be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. The existing uses generate approximately 7,058 ADT and the proposed project would generate approximately 18,528 ADT.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Major sources of energy demand for the proposed project could include building mechanical systems, such as heating and air conditioning. The residential units would be constructed in compliance with the version of the Title 24 energy standards and the CALGreen Code in effect at the time building permit applications are submitted.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings, consumer products, and the use of landscape maintenance equipment.

Long-term operation emissions associated with development consistent with the proposed project were calculated using CalEEMod. Model results are shown in Table L below. CalEEMod output sheets are included in Appendix A.

Table L: Project Operational Emissions

Emission Type	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Uses						
Existing Uses Mobile Sources	23.7	19.0	192.5	0.5	42.0	10.9
Existing Uses Area Sources	2.8	<0.1	3.8	<0.1	<0.1	<0.1
Existing Uses Energy Sources	0.1	1.1	0.9	<0.1	0.1	0.1
Total Existing Uses Emissions	**26.5**	**20.0**	**197.2**	**0.5**	**42.1**	**11.0**
Full Buildout of the Project Site						
Project Buildout Mobile Sources	62.4	50.4	511.7	1.2	112.1	29.0
Project Buildout Area Sources	18.0	6.2	34.9	<0.1	0.5	0.5
Project Buildout Energy Sources	0.2	3.7	2.6	<0.1	0.3	0.3
Total Project Buildout Emissions	**80.6**	**60.2**	**549.2**	**1.3**	**112.9**	**29.8**
Net New Emissions (Project Buildout – Existing Uses)	**54.1**	**40.2**	**352.0**	**0.8**	**70.8**	**18.8**
SCAQMD Thresholds	**55.0**	**55.0**	**550.0**	**150.0**	**150.0**	**55.0**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2024).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

The results shown in Table L indicate that the net new emissions associated with the future development of the proposed project would not exceed the significance criteria for VOCs, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$ emissions; thus, the proposed project would not have a significant effect on regional air quality. Therefore, operation of the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or State ambient air quality standard.

Long-Term Microscale (CO Hot Spot) Analysis

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Anaheim monitoring station, the closest

station to the City of Tustin, showed a highest recorded 1-hour concentration of 2.4 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 1.7 ppm (the State standard is 9 ppm) during the past 3 years (Table G). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

The proposed project would generate 11,470 net new ADT in the immediate vicinity of the opportunity sites and would result in 757 net new AM peak-hour trips and in 1,041 net new PM peak-hour trips. The proposed project would not result in any operational deficiencies to the surrounding roadway system. The evaluation of the study area intersections shows that the addition of traffic associated with new development allowed under the proposed project's Housing Overlay Zone is not expected to create significant level of service changes under buildout conditions. Therefore, project traffic would not create any significant adverse impacts to nearby intersections.

Therefore, given the extremely low level of CO concentrations in the City, and lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly or result in the CO concentrations exceeding the State or federal CO standards.

Health Risk on Nearby Sensitive Receptors

The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors such as residential land uses in the immediate vicinity of the opportunity sites as a result of construction and operational activities. The thresholds are based on standards established by the SCAQMD in its Localized Significance Thresholds (LST) Methodology[48] and are measured against construction and operational emissions that occur on a specific project site. These emissions are primarily generated from heavy-duty construction equipment and demolition, grading, and trenching activities. Construction and operational activities associated with the construction of additional housing units and remaining commercial buildout capacity that could occur with implementation of the proposed project would have the potential to cause or contribute to significant localized air quality impacts to nearby residential land uses.

Construction and operation emissions associated with development consistent with the proposed project were compared to the LST screening tables in SRA 17, based on a 25-meter source-receptor distance.

[48] SCAQMD. 2021. Localized Significance Thresholds. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds (accessed January 2024).

By design, the localized impacts analysis only includes on-site emission sources; however, the CalEEMod outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions detailed in Table N assume all area and energy source emissions would occur on site, and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related on-site vehicle travel, would occur on site. Since the majority of vehicle travel would occur off-site and considering the total overall VMT and trip length included in CalEEMod, assuming that the 5 percent of the project's VMT would occur on-site is conservative.

Table M: Project Localized Construction Emissions (lbs/day)

Source	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Project Construction Emissions	48.8	35.3	8.8	4.9
Localized Significance Threshold	149.0	984.0	9.5	5.5
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2024).
CO= carbon monoxide
lbs/day = pounds per day
NO_x= nitrogen oxides
$PM_{2.5}$= particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

Table N: Project Localized Operational Emissions (lbs/day)

Source	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Project Buildout Net New Emissions	10.4	48.8	4.2	1.6
Localized Significance Threshold	183.0	1,253.0	3.0	2.0
Exceeds Threshold?	**No**	**No**	**Yes**	**No**

Source: Compiled by LSA (March 2024).
CO= carbon monoxide
lbs/day = pounds per day
NO_x= nitrogen oxides
$PM_{2.5}$= particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

The results of the LST analysis, summarized in Table M, indicates that the project would not result in an exceedance of the SCAQMD LSTs during project construction. However, net new emissions associated with the future development of the proposed project would exceed the SCAQMD LSTs for PM_{10} during operational activities. As shown in Table L above, the majority of the PM_{10} emissions are associated with mobile sources from project-related vehicle trips. Emissions of motor vehicles are controlled by State and federal standards, and the project has no control over these standards. As such, implementation of Mitigation Measure AIR-1 would require a project-specific assessment of potential localized impacts and if the project exceeds the applicable LST thresholds, a dispersion modeling analysis would be necessary to calculate health risk from project implementation.

Mitigation Measure AIR-1 Prior to discretionary approval by the City of Tustin (City) for residential development projects subject to California Environmental Quality Act (CEQA) review, project applicants shall prepare and submit a technical assessment evaluating potential project-related air quality impacts, including a localized impacts analysis, to the City for review and approval. The analysis shall be

prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related emissions exceed applicable SCAQMD thresholds of significance, the City shall require that applicants for new development projects incorporate mitigation measures to reduce emissions. The identified measures shall be included as part of the conditions of approval. Additionally, if project-related localized emissions exceed the SCAQMD's thresholds, a dispersion modeling analysis shall be conducted to calculate potential health risk from project implementation.

While Mitigation Measure AIR-1 would serve to reduce localized emissions associated with buildout of the project, localized emission impacts would remain significant and unavoidable.

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. A dispersion modeling analysis would be necessary to calculate health risk from project implementation. However, since it is not possible to translate the amount of an unknown future specific project's emissions to a particular concentration, it is not possible to calculate the risk factor for a particular health effect at the time of this analysis.

Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Particulate matter can also lead to a variety of health effects in people. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Regional emissions of criteria pollutants contribute to these known health effects. The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals and that they are not exposed to elevated concentrations of criteria pollutants in the Basin. To achieve the health-based standards established by the USEPA, the SCAQMD prepares an AQMP that details regional programs to attain the ambient air quality standards.

Although the analysis for the proposed project identifies that construction emissions associated with develop envisioned as part of the proposed project would not exceed the SCAQMD's thresholds for VOCs, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10} emissions, it should be noted that not exceeding the SCAQMD's numeric regional mass daily thresholds does not necessarily correspond to a determination for health risk impacts to sensitive receptors. This is because the mass daily thresholds are in pounds per day emitted into the air, whereas health effects are determined based on the concentration of emissions in the air at a particular receptor (e.g., ppm by volume of air, or $\mu g/m^3$ of air). State and federal ambient air quality standards were developed to protect the most susceptible population groups from adverse health effects and were established in terms of parts per million or micrograms per cubic meter for the applicable emissions.

However, the SCAQMD acknowledges that they have only been able to correlate potential health outcomes for very large emissions sources; specifically, 6,620 pounds per day (lbs/day) of NO_X, and 89,180 lbs/day of VOCs were expected to result in approximately 20 premature deaths per year and

89,947 school absences due to ozone.[49] As identified in Table K above, construction of the proposed project would generate a maximum of 48.9 lbs/day of NO_X and 37.9 lbs/day of VOCs and as shown in Table L, operation of the proposed project would generate a maximum of 60.2 lbs/day of NO_X and 80.9 lbs/day of VOCs. Therefore, it is not expected that any future development associated with the proposed project would generate 6,620 lbs/day of NO_X or 89,180 lbs/day of VOC emissions.

Therefore, emissions associated with the proposed project is not sufficiently high enough to correlate health effects on a Basin-wide level.

Current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences. For this reason, this discussion explains why it is not feasible to provide such an analysis. However, as required by Mitigation Measure AIR-1, once a specific project is proposed, it would still be required to conduct a site-specific localized impact analysis that evaluates potential project health impacts at a project level to immediately adjacent land uses.

In addition, the project would be required to comply with SCAQMD standard conditions, including Rule 403 (Fugitive Dust) to control fugitive dust and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Furthermore, any necessary mitigation would be imposed at the project level once such future projects are proposed.

Asbestos

Naturally occurring asbestos (NOA) refers to the asbestos mineral as a natural component of soils or rocks, as opposed to asbestos in commercial products or other processing operations. Ultramafic rocks may contain asbestos or asbestos-like materials. Naturally occurring asbestos can be released from rocks or soils by routine human activities, such as construction, mining, agriculture, or natural weathering processes. If NOA is disturbed and fibers are released into the air it may become a health risk from inhalation. According to the California Geological Survey, no such rock has been identified in the project vicinity[50]. When demolition is proposed during construction, the demolition of existing buildings may expose asbestos used in building materials. The proposed project would demolish the existing surface parking; however existing buildings on the project site would not be demolished as part of the project. Therefore, the potential risk for naturally occurring asbestos during project construction is small and would not be significant.

Odors

During construction of future development envisioned under the proposed project, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, development envisioned under the proposed

---

49 Supreme Court of California. 2015. *Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno, Plaintiffs and Appellants, v. County of Fresno, Defendant and Despondent, and Friant Ranch, L.P., Real Part in Interest and Despondent.* April.

50 California Geological Survey, n.d. Areas with Potential for Naturally Occurring Asbestos. Website: https://www.arcgis.com/apps/webappviewer/index.html?id=da4b648958844134adc25ff002dbea1c (accessed February 2024).

project would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) affecting a substantial number of people.

ENERGY IMPACTS

The following describes the potential impacts regarding energy resources that could result from implementation of the proposed project.

Energy Consumption

The proposed project would increase the demand for energy through day-to-day operations and fuel consumption associated with project construction. This section discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Construction Energy Use

Construction activities associated with the construction of additional housing units and remaining commercial buildout capacity that could occur with implementation of the project would be through the horizon year 2029, which would cause fuel consumption associated with construction activities. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include grading, site preparation, building construction, architectural coating, and paving activities. Construction activities require energy associated with the manufacture and transportation of building materials, grading activities, and building construction. Construction activities also typically require electricity to power construction-related equipment and do not involve the consumption of natural gas.

Transportation energy represents the largest energy use during construction and would be from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from a site would be anticipated to use diesel fuel, whereas construction workers traveling to and from a site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and the travel mode.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles were based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021. Fuel consumption estimates are presented in Table O. CalEEMod output sheets are included in Appendix A, and detailed energy calculations are included in Appendix B.

Table O: Energy Consumption Estimates during Construction

Energy Type	Total Energy Consumption	Percentage of Increase Countywide
Diesel Fuel (total gallons)	117,690	0.07
Gasoline (total gallons)	148,345	0.01

Source: Compiled by LSA (March 2024).

As indicated in Table O, development envisioned under the proposed project would consume approximately 117,690 gallons of diesel fuel and approximately 148,345 gallons of gasoline during construction. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, construction of future development as envisioned under the proposed project would increase the annual construction generated fuel use in Orange County approximately by approximately 0.07 percent for diesel fuel usage and by approximately 0.01 percent for gasoline fuel usage. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Orange County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. The project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would not be inefficient, wasteful, or unnecessary.

Operational Energy Use

Operational activities associated with the additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the proposed project would result in energy demand associated with natural gas use, electricity consumption, and fuel used for vehicle trips. Energy consumption was estimated for the proposed project using default energy intensities by land use type in CalEEMod. In addition, the proposed project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. Trip generation rates for the proposed project were based on the project's trip generation estimates. The existing uses generate approximately 7,058 ADT and the proposed project would generate approximately 18,528 ADT. The amount of operational fuel use was estimated using CARB's EMFAC2021 model, which provided projections for typical daily fuel usage in Orange County.

Electricity, natural gas, and fuel usage estimates associated with the proposed project are shown in Table P.

Table P: Energy Consumption Estimates during Operation

Energy Type	Annual Energy Consumption
Existing Uses	
Electricity Consumption (kWh/year)	1,984,211
Natural Gas Consumption (therms/year)	40,171
Gasoline (gallons/year)	640,878
Diesel Fuel (gallons/year)	54,200
Full Buildout of the Project Site	
Electricity Consumption (kWh/year)	5,564,016
Natural Gas Consumption (therms/year)	140,666
Gasoline (gallons/year)	1,755,365
Diesel Fuel (gallons/year)	148,455
Net New Energy Usage (Project Buildout – Existing Uses)	
Electricity Consumption (kWh/year)	**3,579,805**
Natural Gas Consumption (therms/year)	**100,495**
Gasoline (gallons/year)	**1,114,487**
Diesel Fuel (gallons/year)	**94,255**

Source: Compiled by LSA (March 2024).
kWh = kilowatt-hours

As shown in Table P, the estimated potential increase in electricity demand associated with development consistent with the proposed project is 3,579,805 kWh per year. Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Orange County by approximately 0.02 percent.

Additionally, as shown in Table P, the estimated potential increase in natural gas demand associated with development consistent with the proposed project is 100,495 therms per year. Total natural gas consumption in Orange County in 2022 was 573 million therms (572,454,744 therms). Therefore, operation of the proposed project would increase the annual natural gas consumption in Orange County by approximately 0.02 percent.

Electrical and natural gas demand associated with future operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. All future development would be required to adhere to all federal, State, and local requirements for energy efficiency, including the latest Title 24 standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting, which would reduce energy usage.

Construction of the 413 additional housing units and remaining commercial buildout capacity would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. As shown in Table P, the increase in fuel use associated with the vehicle trips generated by the proposed project is estimated at approximately 1,114,487 gallons of gasoline and 94,255 gallons of diesel fuel per year. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be

consumed from vehicle trips in Orange County in 2024. Therefore, vehicle trips associated with the proposed project would increase the annual fuel use in Orange County by approximately 0.09 percent for gasoline fuel usage and approximately 0.06 percent for diesel fuel usage. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Although future development, as envisioned under the proposed project would result in an increase in demand for electricity, this increase would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts because each of the opportunity sites are already served by utilities or directly adjacent to existing urban development. Similarly, natural gas infrastructure is not anticipated due to cumulative development. Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Orange County and the region. As such, the buildout associated with the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Conflict with Renewable Energy or Energy Efficiency Plans

In 2002, the Legislature passed SB 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for ZEVs and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC's *2023 Integrated Energy Policy Report* provide the results of the CEC's assessments of a variety of energy issues facing California. As indicated above, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in Orange County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, as demonstrated above, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy.

GREENHOUSE GAS IMPACTS

This section describes the potential GHG impacts associated with implementation the proposed project.

Generation of Greenhouse Gas Emissions

This section describes the proposed project's construction- and operational-related GHG emissions and contribution to global climate change. The SCAQMD has not addressed emission thresholds for construction in its *CEQA Air Quality Handbook*; however, the SCAQMD requires quantification and disclosure. Thus, an evaluation of the project's impacts related to the release of GHG emissions for both construction and operational phases of the project is described below.

Short-Term Greenhouse Gas Emissions

Construction activities associated with the construction of additional housing units and remaining commercial buildout capacity would cause short-term GHG emissions. Construction activities with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, the SCAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined by the SCAQMD as 30 years[51], added to the operational emissions, and compared to the applicable interim GHG significance threshold tier.

Using CalEEMod, it is estimated that development envisioned under the proposed project would generate approximately 1,522.9 MT CO_2e during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 50.8 MT CO_2e.

Long-Term Greenhouse Gas Emissions

Operational activities associated with the additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the proposed project would result in long-term GHG emissions associated with mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Energy source emissions would be generated at off-site utility providers because of increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the proposed project

[51] The SCAQMD has identified the average operational lifespan of buildings to be 30 years. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf (accessed January 2024).

are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Following guidance from the SCAQMD, GHG emissions were estimated using CalEEMod. Table Q shows the calculated GHG emissions for development consistent with the proposed project.

Table Q: Greenhouse Gas Emissions (MT/yr)

Emissions Source	Operational Emissions (MT/yr)			
	CO_2	CH_4	N_2O	CO_2e
Existing Uses				
Existing Uses Mobile Sources	6,169.3	0.3	0.3	6,271.5
Existing Uses Area Sources	1.8	<0.1	<0.1	1.8
Existing Uses Energy Sources	691.7	<0.1	<0.1	694.2
Existing Uses Water Sources	29.3	0.5	<0.1	45.0
Existing Uses Waste Sources	35.8	3.6	0.0	125.3
Total Existing Uses Emissions	**6,927.9**	**4.4**	**0.3**	**7,137.8**
Full Buildout of the Project Site				
Project Buildout Mobile Sources	16,874.0	0.9	0.7	17,151.0
Project Buildout Area Sources	100.0	<0.1	<0.1	100.2
Project Buildout Energy Sources	2,088.8	0.1	<0.1	2,096.0
Project Buildout Water Sources	99.6	1.7	<0.1	152.9
Project Buildout Waste Sources	111.7	11.2	<0.1	390.9
Project Buildout Emissions	**19,274.1**	**13.9**	**0.7**	**19,891.0**
Amortized Construction Emissions				50.8
Total Project Buildout Annual Emissions				**19,941.8**
Net New Emissions (Project Buildout – Existing Uses)				**12,804.0**
SCAQMD Threshold				3,000
Exceed?				Yes
Per Service Population Emissions				**8.2**
SCAQMD Efficiency Target Threshold				4.1
Exceed?				**Yes**

Source: Compiled by LSA (March 2024).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

As discussed above, according to SCAQMD, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 3,000 MT CO_2e/yr. Based on the analysis results, the proposed project would result in a net increase of 12,804.0 MT CO_2e/yr, which would exceed the SCAQMD threshold of 3,000 MT CO_2e/yr. Therefore, consistent with the SCAQMD's interim guidance, the following discussion compares the proposed project to the efficiency-based threshold.

The development of 413 housing units would result in approximately 1,189 additional residents based on the estimated 2.88 persons per household[52] in Tustin. In addition, the proposed project

[52] State of California, Department of Finance. 2023. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change*. May.

would include an additional 39,087 sq ft of restaurant use, 54,328 sq ft of retail and service use, and 25,051 sq ft of office use. Future development, as envisioned under the proposed project would result in 365 new employees. The total service population (residents plus employees) would be 1,554 persons. The proposed project would result in per service population emissions of 8.2 metric tons of CO_2 per year per service population (MT CO_2e/yr/SP), which would exceed the SCAQMD's plan-level screening threshold of 4.1 MT CO_2e/yr/SP.

The development of 413 housing units would result in approximately 1,189 additional residents based on the estimated 2.88 persons per household[53] in Tustin. In addition, the proposed project would include an additional 39,087 sq ft of restaurant use, 54,328 sq ft of retail and service use, and 25,051 sq ft of office use. Future development, as envisioned under the proposed project would result in 365 new employees. The total service population (residents plus employees) would be 1,554 persons. The proposed project would result in per service population emissions of 8.2 metric tons of CO_2 per year per service population (MT CO_2e/yr/SP), which would exceed the SCAQMD's plan-level screening threshold of 4.1 MT CO_2e/yr/SP.

However, as identified above, before development can occur, once a specific development project is proposed, it would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. As demonstrated above, the likely scale and extent of build out associated with future projects would likely exceed the SCAQMD thresholds. As such, implementation of Mitigation Measure GHG-1 would require a project-specific assessment of potential GHG impacts and implementation of feasible mitigation measures to reduce GHG emissions.

Mitigation Measure GHG-1 Prior to discretionary approval by the City of Tustin (City) for residential development projects subject to California Environmental Quality Act (CEQA) review, project applicants shall prepare and submit a technical assessment evaluating potential project-related greenhouse gas (GHG) impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related GHG emissions exceed applicable SCAQMD thresholds of significance and/or Statewide GHG reduction targets, the City shall require that applicants for new development projects incorporate mitigation measures to reduce GHG emissions. Mitigation measures could include, but are not limited, to energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the conditions of approval.

[53] State of California, Department of Finance. 2023. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change*. May.

While Mitigation Measure GHG-1 would serve to reduce GHG emissions associated with buildout of the project, GHG emission impacts would remain significant and unavoidable because compliance with future efficiency targets cannot be assured.

Consistency with Greenhouse Gas Emissions Reduction Plans

An evaluation of the proposed project's consistency with the 2022 Scoping Plan and the 2024–2050 RTP/SCS is provided below.

2022 Scoping Plan

The following discussion evaluates the proposed project according to the goals of the 2022 Scoping Plan, EO B-30-15, AB 1279, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016. AB 1279 establishes State policy to achieve net zero GHG emissions no later than 2045 and for Statewide anthropogenic GHG emissions to be reduced to at least 85 percent below 1990 levels by 2045.

In addition, the 2022 Scoping Plan assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As identified above, buildout of the proposed project would be required to comply with the latest Title 24 and CALGreen Code standards regarding water efficiency and energy conservation requirements. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, buildout associated with the proposed project would be required to comply with the latest Title 24 and CALGreen Code standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the project would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

2024–2050 Regional Transportation Plan/Sustainable Communities Strategy

SCAG's 2024–2050 RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2024–2050 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit oriented communities. The 2024–2050 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2024–2050 RTP/SCS, would reach the GHG emissions reduction target set by CARB, including the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2024–2050 RTP/SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the 2024–2050 RTP/SCS but provides incentives for consistency for governments and developers.

The objectives of the 2024–2050 RTP/SCS are to create a region with: transit as a backbone of the transportation system; more Complete Streets where people and safety are prioritized; policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; more housing to address the existing housing need as defined by the RHNA; safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies.

With respect to determining the proposed project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2024–2050 RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024–2050 RTP/SCS, in 2019, the City's population was 80,400 residents and the City had 27,000 households and 51,700 jobs. Households are forecast to increase by approximately 6,800 households by 2035 and 7,000 households by 2050 and employment are forecast to increase by approximately 14,600 jobs by 2035 and 19,600 jobs by 2050.[54]

As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, Enderle Center (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. The proposed project would accommodate up to 413 housing units to help the City meet its RHNA allocation.

The development of 413 housing units would result in approximately 1,189 additional residents based on the estimated 2.88 persons per household[55] in Tustin. Future development implemented in accordance with the proposed Housing Overlay Zone would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the General Plan. Therefore, since the purpose of the proposed project is to accommodate planned regional housing growth included in the SCAG RHNA, the proposed project would not exceed the growth assumptions in the SCAG's 2024–2050 RTP/SCS or the AQMP. Based on the nature of the proposed project, it is anticipated that implementation of the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the 2024–2050 RTP/SCS.

Implementing SCAG's 2024–2050 RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. The proposed project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035. As identified above, the proposed project would help the City meet its RHNA allocation, which is consistent with SCAG's objectives to provide more housing in Priority Development Areas to preserve natural lands and open spaces and to address the

54 SCAG. 2024. *Connect SoCal 2024 Demographics & Growth Forecast.* Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-tr-demographics-growth-forecast-final-040424.pdf?1712261839 (accessed May 2024).

55 State of California, Department of Finance, 2023. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change*. May.

existing housing need as defined by the RHNA. As such, the proposed project would be consistent with SCAG's 2024–2050 RTP/SCS.

Although the proposed project would be consistent with the identified measures and goals from the 2022 Scoping Plan and 2024–2050 RTP/SCS, the proposed project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the proposed project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

CUMULATIVE IMPACTS

This section presents information regarding potential cumulative impacts associated with the proposed project. As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area. Below is a list of cumulative projects; however, because of the lack of available emissions data for the cumulative projects, cumulative emissions were not evaluated quantitatively. Table R lists the cumulative projects and provides a brief description and the distances from the project site.

Cumulative Air Quality Impacts

The cumulative impact area for air quality related to the proposed project is the South Coast Air Basin. Each project in the Basin is required to comply with SCAQMD rules and regulations and is subject to independent review. Future development that may take place with implementation of the project would contribute criteria pollutants to the area during project construction and operation.

The Basin is currently designated as a nonattainment area for the federal O_3 standard and $PM_{2.5}$ standard and as a nonattainment area for the State O_3, PM_{10}, and $PM_{2.5}$ standard. Thus, the Basin has not met the federal and State standards for these air pollutants. As identified above, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Table R: Cumulative Projects List

Project	Project Address	Project Description	Distance from Project Site
City of Santa Ana Projects			
Baja Fish Tacos	2107 17th Street, Santa Ana, CA	Construction of a 5,005-sq ft multi-tenant commercial building.	2,275 feet
Tustin Service Station	2230 Tustin Avenue, Santa Ana, CA	Construction of a service station with six stations and 12 fueling pumps and a 2,150-sq ft convenience store.	3,330 feet
McDonalds Drive-Through	2101 Santa Clara Avenue, Santa Ana, CA	Demolition of two residential units and construction of a 3,975-sq ft restaurant with drive-thru.	3,620 feet
New ARCO AM/PM Service Station	2301 Seventeenth Street, Santa Ana, CA	Demolition an existing multi-tenant commercial building in order to construct a new single- story, 4,000-sq ft service station with a convenience store to include fast food/retail space and eight gasoline dispensers. Scope of work to include underground storage tanks, 33 parking stalls, new landscaping, and a trash enclosure.	1,180 feet
Park Court Office Building	1801 Parkcourt Place, Santa Ana, CA	Construction of a 3,974 sq ft office building within an existing office park.	4,230 feet
Russell Fischer Center	301 Tustin Avenue, Santa Ana, CA	Demolition of two commercial buildings (approximately 5,100 sq ft) and construction of a service station with four stations and eight dispensing pumps, a 2,775-sq ft convenience store, and a 7,368-sq ft multi-tenant commercial building.	3,910 feet
City of Tustin Projects			
Medical Office Building	17631 17th Street, Tustin, CA	Demolition of existing 5,240 SF restaurant building to construct a 12,320 SF, two-story medical office.	810 feet
Jessup by Intracorp	17802 & 17842 Irvine Boulevard, Tustin, CA	Redevelopment of commercial center to construct 40 residential units (36 attached duplexes and 4 single family units).	3,940 feet

Source: EPD Solutions, Inc. (February 2024).

Air pollution is inherently a cumulative type of impact measured across an air basin. The Air Quality Impacts section above includes an analysis of the proposed project's contribution to cumulative air impacts. As demonstrated above, construction emissions associated with the proposed project would not exceed the SCAQMD thresholds for VOCs, NO_X, CO, SO_X, $PM_{2.5,}$ or PM_{10} emissions. Additionally, operational impacts from criteria pollutant emissions would also not exceed SCAQMD thresholds. However, as discussed above, net new emissions associated with the future development of the proposed project would exceed the SCAQMD LSTs for PM_{10} during operational activities. As such, implementation of Mitigation Measure AIR-1 would require a project-specific assessment of potential localized impacts and if the project exceeds the applicable LST thresholds, a dispersion modeling analysis would be necessary to calculate health risk from project implementation. As such, future cumulative growth within the City could result in potential health risks. Therefore, air quality emissions associated with future development that may occur under the proposed project would result in cumulatively considerable impact.

Cumulative Energy Impacts

The geographic area for cumulative analysis of electricity is that of the SCE service area, while the geographic area for cumulative analysis of natural gas service is that of the SoCalGas service area. Construction of the additional 413 housing units and remaining commercial buildout capacity associated with the proposed project would result in an increased services demand in electricity and natural gas. Although the proposed project would result in an increase in demand for electricity, this increase would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts. As discussed previously, total electricity consumption in the SCE service area in 2022 was 85,870 GWh. By 2030, consumption is anticipated to increase by 12,000 GWh for the low-demand scenario and by 22,000 GWh for the high-demand scenario.[56] While this forecast represents a large increase in electricity consumption, the proposed project's share of cumulative consumption would be negligible. The proposed project, in combination with cumulative development, is well within SCE's system-wide net annual increase in electricity supplies over the 2018 to 2030 period, and there are sufficient planned electricity supplies in the region for estimated net increases in energy demands.

Similarly, additional natural gas infrastructure is not anticipated due to cumulative development. Total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms. Between 2018 and 2030, total natural gas consumption in the SoCalGas service area is forecast to remain steady for the low- and mid-demand scenarios and to increase by approximately 650 million therms in the high-demand scenario due to intense energy efficiency efforts.[57] The proposed project's share of cumulative consumption of natural gas in the SoCalGas service area would be negligible. It is anticipated that SoCalGas would be able to meet the natural gas demand of cumulative development without additional facilities. In addition, both SCE and SoCalGas demand forecasts include the growth contemplated by the proposed project and the other cumulative development within their respective service areas. Increased energy efficiency to comply with building energy efficiency standards would reduce energy consumption on a per-square-foot basis. Furthermore, utility companies are required to increase their renewable energy sources to meet the Renewable Portfolio Standards mandate of 60 percent renewable supplies by 2030. SCE and SoCalGas plan to continue to provide reliable service to their customers and upgrade their distribution systems as necessary to meet future demand.

Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Orange County and the region. The proposed project and cumulative development are required to comply with various federal and State government legislation to improve energy efficiency in buildings, equipment, and appliances, and reduce VMT.

56 CEC. 2018. *California Energy Demand, 2018–2030 Revised Forecast*. Publication Number: CEC-200-2018-002-CMF. February. Website: https://efiling.energy.ca.gov/getdocument.aspx?tn=223244 (accessed February 2024).

57 Ibid.

As such, the proposed project would not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, the proposed project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable.

Cumulative Greenhouse Gas Impacts

GHG impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in GHG emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the U.S. or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

As previously stated, GHG emissions associated with the buildout under the proposed project would exceed the SCAQMD thresholds of 3,000 MT CO_2e/yr and 4.1 MT CO_2e/yr/SP. Since GHG is a global issue, it is unlikely that the proposed project would generate enough GHG emissions to influence GHG emissions on its own; however, because project-related CO_2e emissions would exceed the SCAQMD's thresholds, the proposed project would have a significant contribution to cumulatively considerable GHG emission impacts.

CONCLUSION

Based on the analysis presented above, construction and operation of the proposed project would not result in the generation of criteria air pollutants that would exceed SCAQMD thresholds of significance. Compliance with SCAQMD Rule 403 would further reduce construction dust impacts. Even with the implementation of Mitigation Measure AIR-1, proposed project has the potential to produce significant emissions that would affect nearby sensitive receptors. The project would not result in other emissions (such as those leading to odors) affecting a substantial number of people. In addition, the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Operation of the proposed project would generate GHG emissions that would have a significant effect on the environment and would therefore not be consistent with the 2024–2050 RTP/SCS or the goals of the 2022 Scoping Plan.

APPENDIX A

CALEEMOD OUTPUT SHEETS

Enderle Center - Proposed Project (Construction) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

3.3. Site Preparation (2024) - Unmitigated

3.5. Grading (2024) - Unmitigated

3.7. Grading (2025) - Unmitigated

3.9. Building Construction (2025) - Unmitigated

3.11. Building Construction (2026) - Unmitigated

3.13. Paving (2026) - Unmitigated

3.15. Architectural Coating (2025) - Unmitigated

3.17. Architectural Coating (2026) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Enderle Center - Proposed Project (Construction)
Construction Start Date	10/7/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	18.6
Location	17350 17th St, Tustin, CA 92780, USA
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5961
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	413	Dwelling Unit	7.00	396,480	0.00	—	1,231	—

High Turnover (Sit Down Restaurant)	39.1	1000sqft	2.00	39,087	0.00	—	—	—
Strip Mall	54.3	1000sqft	2.00	54,328	0.00	—	—	—
General Office Building	25.1	1000sqft	0.80	25,051	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	36.1	22.2	34.3	0.04	0.70	4.98	5.68	0.66	1.19	1.85	—	8,927	8,927	0.26	0.46	9,094
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	38.0	48.9	36.4	0.10	1.36	10.3	11.2	1.23	3.99	5.01	—	13,428	13,428	0.92	1.60	13,928
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.35	16.1	23.5	0.03	0.51	3.55	4.06	0.47	0.85	1.32	—	6,306	6,306	0.19	0.33	6,417
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.52	2.94	4.28	< 0.005	0.09	0.65	0.74	0.09	0.16	0.24	—	1,044	1,044	0.03	0.05	1,062

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.88	22.2	34.3	0.04	0.70	4.98	5.68	0.66	1.19	1.85	—	8,927	8,927	0.26	0.46	9,094
2026	36.1	1.29	4.54	< 0.005	0.07	0.89	0.95	0.06	0.21	0.27	—	1,017	1,017	0.02	0.03	1,030
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.40	48.9	36.4	0.10	1.36	10.3	11.2	1.23	3.99	5.01	—	13,428	13,428	0.92	1.60	13,928
2025	38.0	48.9	36.3	0.06	1.36	5.86	6.63	1.23	1.49	2.72	—	9,700	9,700	0.29	0.49	9,856
2026	37.9	23.5	34.8	0.04	0.77	5.86	6.63	0.72	1.40	2.11	—	9,569	9,569	0.27	0.49	9,724
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.20	7.18	5.13	0.01	0.19	1.10	1.29	0.17	0.34	0.51	—	1,451	1,451	0.08	0.09	1,482
2025	3.02	16.1	23.5	0.03	0.51	3.55	4.06	0.47	0.85	1.32	—	6,306	6,306	0.19	0.33	6,417
2026	8.35	3.50	5.06	0.01	0.12	0.76	0.88	0.12	0.18	0.30	—	1,280	1,280	0.04	0.06	1,300
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.04	1.31	0.94	< 0.005	0.04	0.20	0.24	0.03	0.06	0.09	—	240	240	0.01	0.02	245
2025	0.55	2.94	4.28	< 0.005	0.09	0.65	0.74	0.09	0.16	0.24	—	1,044	1,044	0.03	0.05	1,062
2026	1.52	0.64	0.92	< 0.005	0.02	0.14	0.16	0.02	0.03	0.05	—	212	212	0.01	0.01	215

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	24.9	18.2	0.03	0.79	—	0.79	0.71	—	0.71	—	3,425	3,425	0.14	0.03	3,437
Demolition	—	—	—	—	—	7.64	7.64	—	1.16	1.16	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.37	1.00	< 0.005	0.04	—	0.04	0.04	—	0.04	—	188	188	0.01	< 0.005	188
Demolition	—	—	—	—	—	0.42	0.42	—	0.06	0.06	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.25	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	31.2
Demolition	—	—	—	—	—	0.08	0.08	—	0.01	0.01	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.78	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	193	193	< 0.005	0.01	196
Vendor	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

Hauling	0.19	12.6	5.35	0.06	0.12	2.50	2.62	0.12	0.70	0.82	—	9,809	9,809	0.78	1.56	10,295
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.7	10.7	< 0.005	< 0.005	10.9
Vendor	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
Hauling	0.01	0.70	0.29	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	537	537	0.04	0.09	564
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.78	1.78	< 0.005	< 0.005	1.80
Vendor	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
Hauling	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	89.0	89.0	0.01	0.01	93.4

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	—	5,296	5,296	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	1.09	0.78	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	146
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	24.1
Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.08	0.91	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	226	226	< 0.005	0.01	228
Vendor	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
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.27	6.27	< 0.005	< 0.005	6.35
Vendor	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
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	1.05

Vendor	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
Hauling	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

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	48.8	35.3	0.06	1.36	—	1.36	1.23	—	1.23	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	4.01	2.91	0.01	0.11	—	0.11	0.10	—	0.10	—	542	542	0.02	< 0.005	544
Dust From Material Movement	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.73	0.53	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	90.1

Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	1.04	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	< 0.005	0.01	261
Vendor	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
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.5	21.5	< 0.005	< 0.005	21.8
Vendor	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
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.56	3.56	< 0.005	< 0.005	3.61
Vendor	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
Hauling	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

3.7. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	48.8	35.3	0.06	1.36	—	1.36	1.23	—	1.23	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.9	12.9	< 0.005	< 0.005	13.0
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.14	2.14	< 0.005	< 0.005	2.15
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	0.97	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	< 0.005	0.01	256
Vendor	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
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	0.51
Vendor	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
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	0.08
Vendor	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
Hauling	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

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	13.4	10.2	0.02	0.49	—	0.49	0.46	—	0.46	—	1,708	1,708	0.07	0.01	1,714
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.45	1.86	< 0.005	0.09	—	0.09	0.08	—	0.08	—	283	283	0.01	< 0.005	284
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.20	1.18	19.0	0.00	0.00	4.43	4.43	0.00	1.04	1.04	—	4,503	4,503	0.05	0.16	4,569
Vendor	0.06	2.11	1.05	0.01	0.01	0.54	0.56	0.01	0.15	0.16	—	2,027	2,027	0.11	0.28	2,119
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.20	1.34	16.4	0.00	0.00	4.43	4.43	0.00	1.04	1.04	—	4,285	4,285	0.06	0.16	4,334
Vendor	0.05	2.19	1.07	0.01	0.01	0.54	0.56	0.01	0.15	0.16	—	2,028	2,028	0.11	0.28	2,114
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.84	0.95	12.2	0.00	0.00	3.12	3.12	0.00	0.73	0.73	—	3,094	3,094	0.04	0.11	3,134
Vendor	0.04	1.57	0.76	0.01	0.01	0.38	0.39	0.01	0.11	0.12	—	1,444	1,444	0.08	0.20	1,507

Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.17	2.23	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	512	512	0.01	0.02	519
Vendor	0.01	0.29	0.14	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	239	239	0.01	0.03	250
Hauling	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

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.11	1.60	< 0.005	0.08	—	0.08	0.07	—	0.07	—	267	267	0.01	< 0.005	268
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.38	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.3	44.3	< 0.005	< 0.005	44.4
Onsite truck	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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.14	1.19	15.4	0.00	0.00	4.43	4.43	0.00	1.04	1.04	—	4,203	4,203	0.06	0.16	4,253
Vendor	0.04	2.11	1.04	0.01	0.01	0.54	0.56	0.01	0.15	0.16	—	1,995	1,995	0.10	0.28	2,081
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	1.79	0.00	0.00	0.49	0.49	0.00	0.11	0.11	—	475	475	0.01	0.02	482
Vendor	< 0.005	0.24	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	222	222	0.01	0.03	232
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.33	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	78.7	78.7	< 0.005	< 0.005	79.7
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.8	36.8	< 0.005	0.01	38.5
Hauling	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

3.13. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.50	13.3	10.6	0.01	0.58	—	0.58	0.54	—	0.54	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.73	0.58	< 0.005	0.03	—	0.03	0.03	—	0.03	—	82.8	82.8	< 0.005	< 0.005	83.1
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	13.7	13.7	< 0.005	< 0.005	13.8
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.68	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	186	186	< 0.005	0.01	188
Vendor	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
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	10.5
Vendor	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

Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.71	1.71	< 0.005	< 0.005	1.73
Vendor	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
Hauling	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

3.15. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	134
Architectural Coatings	35.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.27	6.27	< 0.005	< 0.005	6.29
Architectural Coatings	1.68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.04	1.04	< 0.005	< 0.005	1.04
Architectural Coatings	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.27	3.28	0.00	0.00	0.89	0.89	0.00	0.21	0.21	—	857	857	0.01	0.03	867
Vendor	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
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.8	40.8	< 0.005	< 0.005	41.3
Vendor	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
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.75	6.75	< 0.005	< 0.005	6.84
Vendor	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
Hauling	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

3.17. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	134
Architectural Coatings	35.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	134
Architectural Coatings	35.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.0	30.0	< 0.005	< 0.005	30.1
Architectural Coatings	8.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.97	4.97	< 0.005	< 0.005	4.99

Architectu Coatings	1.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	3.58	0.00	0.00	0.89	0.89	0.00	0.21	0.21	—	883	883	0.01	0.03	896
Vendor	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
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.24	3.08	0.00	0.00	0.89	0.89	0.00	0.21	0.21	—	841	841	0.01	0.03	851
Vendor	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
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.72	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	192	192	< 0.005	0.01	194
Vendor	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
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	31.8	31.8	< 0.005	< 0.005	32.2
Vendor	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
Hauling	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/7/2024	11/4/2024	5.00	20.0	—
Site Preparation	Site Preparation	11/5/2024	11/19/2024	5.00	10.0	—
Grading	Grading	11/20/2024	1/1/2025	5.00	30.0	—
Building Construction	Building Construction	1/2/2025	2/26/2026	5.00	300	—
Paving	Paving	2/27/2026	3/27/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	12/8/2025	4/25/2026	5.00	100	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 2	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 2	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Tier 2	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 2	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 2	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 2	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 2	1.00	8.00	148	0.41

Grading	Rubber Tired Dozers	Diesel	Tier 2	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 2	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 2	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 2	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 2	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 2	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 2	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 2	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 2	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 2	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 2	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 2	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	138	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	339	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	63.6	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	67.8	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	802,872	267,624	177,699	59,233	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	11,054	—
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
High Turnover (Sit Down Restaurant)	0.00	0%

Strip Mall	0.00	0%
General Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	The project site is approximately 11.80 acres.
Operations: Vehicle Data	The proposed project would generate approximately 18,528 average daily trips.
Operations: Hearths	Assuming no wood burning hearths.
Construction: Construction Phases	Project construction could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities.
Construction: Off-Road Equipment	Assuming the use of Tier 2 construction equipment.

Enderle Center - Proposed Project (Operational) Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

2.6. Operations Emissions by Sector, Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Enderle Center - Proposed Project (Operational)
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	18.6
Location	17350 17th St, Tustin, CA 92780, USA
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5961
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	413	Dwelling Unit	7.00	396,480	0.00	—	1,231	—

High Turnover (Sit Down Restaurant)	67.8	1000sqft	2.00	67,837	0.00	—	—	—
Strip Mall	94.3	1000sqft	2.00	94,288	0.00	—	—	—
General Office Building	43.5	1000sqft	0.80	43,477	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Transportation	T-5	Implement Commute Trip Reduction Program (Voluntary)
Transportation	T-14*	Provide Electric Vehicle Charging Infrastructure
Transportation	T-31-A*	Locate Project in Area with High Destination Accessibility
Transportation	T-34*	Provide Bike Parking
Transportation	T-43*	Provide Real-Time Transit Information
Energy	E-1	Buildings Exceed 2019 Title 24 Building Envelope Energy Efficiency Standards
Energy	E-2	Require Energy Efficient Appliances
Energy	E-12-B	Install Electric Space Heater in Place of Natural Gas Heaters in Residences
Energy	E-13	Install Electric Ranges in Place of Gas Ranges
Energy	E-15	Require All-Electric Development
Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes
Area Sources	LL-1	Replace Gas Powered Landscape Equipment with Zero-Emission Landscape Equipment
Area Sources	AS-2	Use Low-VOC Paints

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	80.6	56.1	549	1.29	1.56	111	113	1.50	28.3	29.8	772	145,839	146,611	84.5	5.21	150,898
Mit.	75.6	53.8	507	1.26	1.42	109	111	1.37	27.8	29.1	760	140,879	141,639	82.9	5.09	145,841
% Reduced	6%	4%	8%	2%	9%	2%	2%	9%	2%	2%	2%	3%	3%	2%	2%	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	76.3	59.9	483	1.24	1.53	111	113	1.48	28.3	29.7	772	140,886	141,658	84.7	5.45	145,524
Mit.	74.9	57.8	474	1.21	1.42	109	111	1.37	27.8	29.1	760	136,083	136,843	83.2	5.32	140,631
% Reduced	2%	3%	2%	2%	7%	2%	2%	7%	2%	2%	2%	3%	3%	2%	2%	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	76.0	49.0	453	1.02	1.00	91.6	92.6	0.95	23.3	24.2	772	115,618	116,390	84.0	4.82	120,221
Mit.	72.2	46.8	423	1.00	0.87	90.1	91.0	0.82	22.9	23.7	760	111,122	111,882	82.5	4.70	115,637
% Reduced	5%	4%	7%	2%	13%	2%	2%	13%	2%	2%	2%	4%	4%	2%	2%	4%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.9	8.94	82.7	0.19	0.18	16.7	16.9	0.17	4.25	4.42	128	19,142	19,270	13.9	0.80	19,904
Mit.	13.2	8.55	77.3	0.18	0.16	16.4	16.6	0.15	4.18	4.33	126	18,397	18,523	13.7	0.78	19,145
% Reduced	5%	4%	7%	2%	13%	2%	2%	13%	2%	2%	2%	4%	4%	2%	2%	4%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	62.4	46.3	512	1.23	0.77	111	112	0.72	28.3	29.0	—	125,227	125,227	5.96	4.89	127,345
Area	18.0	6.13	34.8	0.04	0.50	—	0.50	0.49	—	0.49	0.00	7,491	7,491	0.14	0.01	7,499
Energy	0.21	3.70	2.63	0.02	0.29	—	0.29	0.29	—	0.29	—	12,617	12,617	0.90	0.07	12,660
Water	—	—	—	—	—	—	—	—	—	—	97.3	504	601	10.0	0.24	923
Waste	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Total	80.6	56.1	549	1.29	1.56	111	113	1.50	28.3	29.8	772	145,839	146,611	84.5	5.21	150,898
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	61.7	50.4	478	1.18	0.77	111	112	0.72	28.3	29.0	—	120,373	120,373	6.24	5.13	122,071
Area	14.4	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Energy	0.21	3.70	2.63	0.02	0.29	—	0.29	0.29	—	0.29	—	12,617	12,617	0.90	0.07	12,660
Water	—	—	—	—	—	—	—	—	—	—	97.3	504	601	10.0	0.24	923
Waste	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Total	76.3	59.9	483	1.24	1.53	111	113	1.48	28.3	29.7	772	140,886	141,658	84.7	5.45	145,524
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	59.2	44.7	428	1.00	0.66	91.6	92.3	0.61	23.3	23.9	—	101,923	101,923	5.66	4.51	103,592
Area	16.6	0.61	22.3	< 0.005	0.05	—	0.05	0.05	—	0.05	0.00	574	574	0.01	< 0.005	575
Energy	0.21	3.70	2.63	0.02	0.29	—	0.29	0.29	—	0.29	—	12,617	12,617	0.90	0.07	12,660
Water	—	—	—	—	—	—	—	—	—	—	97.3	504	601	10.0	0.24	923

Waste	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Total	76.0	49.0	453	1.02	1.00	91.6	92.6	0.95	23.3	24.2	772	115,618	116,390	84.0	4.82	120,221
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.8	8.16	78.2	0.18	0.12	16.7	16.8	0.11	4.25	4.36	—	16,874	16,874	0.94	0.75	17,151
Area	3.03	0.11	4.07	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	95.1	95.1	< 0.005	< 0.005	95.2
Energy	0.04	0.68	0.48	< 0.005	0.05	—	0.05	0.05	—	0.05	—	2,089	2,089	0.15	0.01	2,096
Water	—	—	—	—	—	—	—	—	—	—	16.1	83.4	99.6	1.66	0.04	153
Waste	—	—	—	—	—	—	—	—	—	—	112	0.00	112	11.2	0.00	391
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.1
Total	13.9	8.94	82.7	0.19	0.18	16.7	16.9	0.17	4.25	4.42	128	19,142	19,270	13.9	0.80	19,904

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	61.3	45.5	503	1.21	0.76	109	110	0.71	27.8	28.5	—	123,093	123,093	5.85	4.80	125,174
Area	14.2	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Energy	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	9,952	9,952	0.70	0.06	9,987
Water	—	—	—	—	—	—	—	—	—	—	85.3	442	527	8.78	0.21	809
Waste	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Total	75.6	53.8	507	1.26	1.42	109	111	1.37	27.8	29.1	760	140,879	141,639	82.9	5.09	145,841
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	60.6	49.5	470	1.16	0.76	109	110	0.71	27.8	28.5	—	118,322	118,322	6.13	5.04	119,990

Area	14.2	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Energy	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	9,928	9,928	0.69	0.06	9,962
Water	—	—	—	—	—	—	—	—	—	—	85.3	442	527	8.78	0.21	809
Waste	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Total	74.9	57.8	474	1.21	1.42	109	111	1.37	27.8	29.1	760	136,083	136,843	83.2	5.32	140,631
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	58.2	43.9	421	0.98	0.65	90.1	90.8	0.60	22.9	23.5	—	100,229	100,229	5.56	4.43	101,871
Area	13.8	0.40	0.17	< 0.005	0.03	—	0.03	0.03	—	0.03	0.00	506	506	0.01	< 0.005	507
Energy	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	9,945	9,945	0.70	0.06	9,979
Water	—	—	—	—	—	—	—	—	—	—	85.3	442	527	8.78	0.21	809
Waste	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Total	72.2	46.8	423	1.00	0.87	90.1	91.0	0.82	22.9	23.7	760	111,122	111,882	82.5	4.70	115,637
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.6	8.02	76.9	0.18	0.12	16.4	16.6	0.11	4.18	4.29	—	16,594	16,594	0.92	0.73	16,866
Area	2.53	0.07	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	83.8	83.8	< 0.005	< 0.005	83.9
Energy	0.03	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,646	1,646	0.12	0.01	1,652
Water	—	—	—	—	—	—	—	—	—	—	14.1	73.1	87.3	1.45	0.03	134
Waste	—	—	—	—	—	—	—	—	—	—	112	0.00	112	11.2	0.00	391
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.1
Total	13.2	8.55	77.3	0.18	0.16	16.4	16.6	0.15	4.18	4.33	126	18,397	18,523	13.7	0.78	19,145

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	6.49	5.15	57.5	0.14	0.09	12.8	12.9	0.08	3.26	3.34	—	14,408	14,408	0.65	0.55	14,645
High Turnover (Sit Down Restaurant)	24.4	18.0	198	0.47	0.30	43.0	43.3	0.28	10.9	11.2	—	48,394	48,394	2.32	1.90	49,215
Strip Mall	29.9	22.0	243	0.58	0.37	52.7	53.0	0.34	13.4	13.7	—	59,289	59,289	2.84	2.32	60,295
General Office Building	1.58	1.16	12.9	0.03	0.02	2.79	2.81	0.02	0.71	0.73	—	3,136	3,136	0.15	0.12	3,190
Total	62.4	46.3	512	1.23	0.77	111	112	0.72	28.3	29.0	—	125,227	125,227	5.96	4.89	127,345
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	6.42	5.61	53.3	0.14	0.09	12.8	12.9	0.08	3.26	3.34	—	13,847	13,847	0.68	0.57	14,036
High Turnover (Sit Down Restaurant)	24.1	19.5	185	0.46	0.30	43.0	43.3	0.28	10.9	11.2	—	46,519	46,519	2.43	1.99	47,178
Strip Mall	29.6	23.9	227	0.56	0.37	52.7	53.0	0.34	13.4	13.7	—	56,992	56,992	2.98	2.44	57,799
General Office Building	1.56	1.27	12.0	0.03	0.02	2.79	2.81	0.02	0.71	0.73	—	3,015	3,015	0.16	0.13	3,058
Total	61.7	50.4	478	1.18	0.77	111	112	0.72	28.3	29.0	—	120,373	120,373	6.24	5.13	122,071
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartment Mid Rise	1.16	1.04	9.97	0.03	0.02	2.32	2.33	0.01	0.59	0.60	—	2,318	2,318	0.11	0.10	2,353
High Turnover (Sit Down Restaurant)	4.00	2.47	23.6	0.05	0.03	4.40	4.44	0.03	1.12	1.15	—	4,514	4,514	0.31	0.23	4,597
Strip Mall	5.36	4.41	42.4	0.10	0.07	9.50	9.57	0.06	2.41	2.47	—	9,538	9,538	0.49	0.40	9,689
General Office Building	0.28	0.23	2.24	0.01	< 0.005	0.50	0.51	< 0.005	0.13	0.13	—	505	505	0.03	0.02	513
Total	10.8	8.16	78.2	0.18	0.12	16.7	16.8	0.11	4.25	4.36	—	16,874	16,874	0.94	0.75	17,151

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	6.49	5.15	57.5	0.14	0.09	12.8	12.9	0.08	3.26	3.34	—	14,408	14,408	0.65	0.55	14,645
High Turnover (Sit Down Restaurant)	23.9	17.6	195	0.47	0.29	42.2	42.5	0.27	10.7	11.0	—	47,462	47,462	2.27	1.86	48,267
Strip Mall	29.3	21.6	238	0.57	0.36	51.7	52.0	0.33	13.1	13.4	—	58,147	58,147	2.79	2.28	59,133
General Office Building	1.55	1.14	12.6	0.03	0.02	2.73	2.75	0.02	0.69	0.71	—	3,076	3,076	0.15	0.12	3,128
Total	61.3	45.5	503	1.21	0.76	109	110	0.71	27.8	28.5	—	123,093	123,093	5.85	4.80	125,174
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	6.42	5.61	53.3	0.14	0.09	12.8	12.9	0.08	3.26	3.34	—	13,847	13,847	0.68	0.57	14,036
High Turnover (Sit Down Restaurant)	23.7	19.2	182	0.45	0.29	42.2	42.5	0.27	10.7	11.0	—	45,624	45,624	2.38	1.95	46,270
Strip Mall	29.0	23.5	223	0.55	0.36	51.7	52.0	0.34	13.1	13.4	—	55,895	55,895	2.92	2.39	56,686
General Office Building	1.53	1.24	11.8	0.03	0.02	2.73	2.75	0.02	0.69	0.71	—	2,957	2,957	0.15	0.13	2,999
Total	60.6	49.5	470	1.16	0.76	109	110	0.71	27.8	28.5	—	118,322	118,322	6.13	5.04	119,990
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.16	1.04	9.97	0.03	0.02	2.32	2.33	0.01	0.59	0.60	—	2,318	2,318	0.11	0.10	2,353
High Turnover (Sit Down Restaurant)	3.92	2.43	23.1	0.05	0.03	4.32	4.35	0.03	1.10	1.13	—	4,427	4,427	0.30	0.22	4,508
Strip Mall	5.26	4.33	41.6	0.10	0.07	9.32	9.38	0.06	2.37	2.43	—	9,355	9,355	0.48	0.40	9,502
General Office Building	0.28	0.23	2.20	0.01	< 0.005	0.49	0.50	< 0.005	0.13	0.13	—	495	495	0.03	0.02	503
Total	10.6	8.02	76.9	0.18	0.12	16.4	16.6	0.11	4.18	4.29	—	16,594	16,594	0.92	0.73	16,866

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartment Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2,207	2,207	0.14	0.02	2,215
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	3,424	3,424	0.21	0.03	3,437
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,350	1,350	0.08	0.01	1,355
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,129	1,129	0.07	0.01	1,134
Total	—	—	—	—	—	—	—	—	—	—	—	8,109	8,109	0.50	0.06	8,140
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2,207	2,207	0.14	0.02	2,215
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	3,424	3,424	0.21	0.03	3,437
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,350	1,350	0.08	0.01	1,355
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,129	1,129	0.07	0.01	1,134
Total	—	—	—	—	—	—	—	—	—	—	—	8,109	8,109	0.50	0.06	8,140
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	365	365	0.02	< 0.005	367
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	567	567	0.04	< 0.005	569
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	223	223	0.01	< 0.005	224

General Office Building	—	—	—	—	—	—	—	—	—	—	—	187	187	0.01	< 0.005	188
Total	—	—	—	—	—	—	—	—	—	—	—	1,343	1,343	0.08	0.01	1,348

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2,059	2,059	0.13	0.02	2,067
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2,768	2,768	0.17	0.02	2,778
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,169	1,169	0.07	0.01	1,173
General Office Building	—	—	—	—	—	—	—	—	—	—	—	983	983	0.06	0.01	986
Total	—	—	—	—	—	—	—	—	—	—	—	6,978	6,978	0.43	0.05	7,005
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2,043	2,043	0.13	0.02	2,051
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2,765	2,765	0.17	0.02	2,775
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,165	1,165	0.07	0.01	1,169

General Office Building	—	—	—	—	—	—	—	—	—	—	—	981	981	0.06	0.01	985
Total	—	—	—	—	—	—	—	—	—	—	—	6,953	6,953	0.43	0.05	6,980
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	340	340	0.02	< 0.005	341
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	458	458	0.03	< 0.005	460
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	193	193	0.01	< 0.005	194
General Office Building	—	—	—	—	—	—	—	—	—	—	—	163	163	0.01	< 0.005	163
Total	—	—	—	—	—	—	—	—	—	—	—	1,154	1,154	0.07	0.01	1,158

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.07	1.16	0.49	0.01	0.09	—	0.09	0.09	—	0.09	—	1,470	1,470	0.13	< 0.005	1,474
High Turnover (Sit Down Restaurant)	0.12	2.10	1.76	0.01	0.16	—	0.16	0.16	—	0.16	—	2,503	2,503	0.22	< 0.005	2,510
Strip Mall	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	181	181	0.02	< 0.005	181

General Office Building	0.02	0.30	0.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	353	353	0.03	< 0.005	354
Total	0.21	3.70	2.63	0.02	0.29	—	0.29	0.29	—	0.29	—	4,507	4,507	0.40	0.01	4,520
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.07	1.16	0.49	0.01	0.09	—	0.09	0.09	—	0.09	—	1,470	1,470	0.13	< 0.005	1,474
High Turnover (Sit Down Restaurant)	0.12	2.10	1.76	0.01	0.16	—	0.16	0.16	—	0.16	—	2,503	2,503	0.22	< 0.005	2,510
Strip Mall	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	181	181	0.02	< 0.005	181
General Office Building	0.02	0.30	0.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	353	353	0.03	< 0.005	354
Total	0.21	3.70	2.63	0.02	0.29	—	0.29	0.29	—	0.29	—	4,507	4,507	0.40	0.01	4,520
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.21	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	243	243	0.02	< 0.005	244
High Turnover (Sit Down Restaurant)	0.02	0.38	0.32	< 0.005	0.03	—	0.03	0.03	—	0.03	—	414	414	0.04	< 0.005	416
Strip Mall	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	30.0	30.0	< 0.005	< 0.005	30.0
General Office Building	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.5	58.5	0.01	< 0.005	58.6
Total	0.04	0.68	0.48	< 0.005	0.05	—	0.05	0.05	—	0.05	—	746	746	0.07	< 0.005	748

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
High Turnover (Sit Down Restaurant)	0.11	2.08	1.75	0.01	0.16	—	0.16	0.16	—	0.16	—	2,486	2,486	0.22	< 0.005	2,493
Strip Mall	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	179	179	0.02	< 0.005	179
General Office Building	0.01	0.26	0.22	< 0.005	0.02	—	0.02	0.02	—	0.02	—	309	309	0.03	< 0.005	310
Total	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	2,974	2,974	0.26	0.01	2,982
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
High Turnover (Sit Down Restaurant)	0.11	2.08	1.75	0.01	0.16	—	0.16	0.16	—	0.16	—	2,486	2,486	0.22	< 0.005	2,493
Strip Mall	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	179	179	0.02	< 0.005	179
General Office Building	0.01	0.26	0.22	< 0.005	0.02	—	0.02	0.02	—	0.02	—	309	309	0.03	< 0.005	310
Total	0.14	2.49	2.09	0.01	0.19	—	0.19	0.19	—	0.19	—	2,974	2,974	0.26	0.01	2,982
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	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
High Turnover (Sit Down Restaurant)	0.02	0.38	0.32	< 0.005	0.03	—	0.03	0.03	—	0.03	—	412	412	0.04	< 0.005	413
Strip Mall	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.6	29.6	< 0.005	< 0.005	29.7
General Office Building	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	51.1	51.1	< 0.005	< 0.005	51.3
Total	0.03	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	492	492	0.04	< 0.005	494

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.34	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Consumer Products	12.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.61	0.31	32.3	< 0.005	0.03	—	0.03	0.02	—	0.02	—	99.4	99.4	< 0.005	< 0.005	99.8
Total	18.0	6.13	34.8	0.04	0.50	—	0.50	0.49	—	0.49	0.00	7,491	7,491	0.14	0.01	7,499

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.34	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Consumer Products	12.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	14.4	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	0.07	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	83.8	83.8	< 0.005	< 0.005	83.9
Consumer Products	2.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.04	4.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	11.3
Total	3.03	0.11	4.07	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	95.1	95.1	< 0.005	< 0.005	95.2

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.34	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Consumer Products	12.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectu Coatings	0.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	14.2	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.34	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Consumer Products	12.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	14.2	5.82	2.48	0.04	0.47	—	0.47	0.47	—	0.47	0.00	7,392	7,392	0.14	0.01	7,399
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	0.07	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	83.8	83.8	< 0.005	< 0.005	83.9
Consumer Products	2.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2.53	0.07	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	83.8	83.8	< 0.005	< 0.005	83.9

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	29.7	154	183	3.05	0.07	282
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	39.5	204	244	4.06	0.10	374
Strip Mall	—	—	—	—	—	—	—	—	—	—	13.4	69.3	82.7	1.38	0.03	127
General Office Building	—	—	—	—	—	—	—	—	—	—	14.8	76.7	91.5	1.52	0.04	140
Total	—	—	—	—	—	—	—	—	—	—	97.3	504	601	10.0	0.24	923
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	29.7	154	183	3.05	0.07	282
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	39.5	204	244	4.06	0.10	374
Strip Mall	—	—	—	—	—	—	—	—	—	—	13.4	69.3	82.7	1.38	0.03	127
General Office Building	—	—	—	—	—	—	—	—	—	—	14.8	76.7	91.5	1.52	0.04	140
Total	—	—	—	—	—	—	—	—	—	—	97.3	504	601	10.0	0.24	923
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	4.92	25.5	30.4	0.51	0.01	46.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	6.53	33.8	40.4	0.67	0.02	62.0

Strip Mall	—	—	—	—	—	—	—	—	—	—	2.22	11.5	13.7	0.23	0.01	21.0
General Office Building	—	—	—	—	—	—	—	—	—	—	2.45	12.7	15.1	0.25	0.01	23.3
Total	—	—	—	—	—	—	—	—	—	—	16.1	83.4	99.6	1.66	0.04	153

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	23.8	123	147	2.45	0.06	226
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	35.8	185	221	3.68	0.09	340
Strip Mall	—	—	—	—	—	—	—	—	—	—	12.3	63.6	75.9	1.26	0.03	117
General Office Building	—	—	—	—	—	—	—	—	—	—	13.4	69.5	83.0	1.38	0.03	127
Total	—	—	—	—	—	—	—	—	—	—	85.3	442	527	8.78	0.21	809
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	23.8	123	147	2.45	0.06	226
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	35.8	185	221	3.68	0.09	340

Strip Mall	—	—	—	—	—	—	—	—	—	—	12.3	63.6	75.9	1.26	0.03	117
General Office Building	—	—	—	—	—	—	—	—	—	—	13.4	69.5	83.0	1.38	0.03	127
Total	—	—	—	—	—	—	—	—	—	—	85.3	442	527	8.78	0.21	809
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	3.94	20.4	24.3	0.41	0.01	37.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	5.93	30.7	36.6	0.61	0.01	56.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.03	10.5	12.6	0.21	0.01	19.3
General Office Building	—	—	—	—	—	—	—	—	—	—	2.22	11.5	13.7	0.23	0.01	21.1
Total	—	—	—	—	—	—	—	—	—	—	14.1	73.1	87.3	1.45	0.03	134

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	165	0.00	165	16.5	0.00	576

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	435	0.00	435	43.5	0.00	1,522
Strip Mall	—	—	—	—	—	—	—	—	—	—	53.4	0.00	53.4	5.33	0.00	187
General Office Building	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	76.2
Total	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	165	0.00	165	16.5	0.00	576
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	435	0.00	435	43.5	0.00	1,522
Strip Mall	—	—	—	—	—	—	—	—	—	—	53.4	0.00	53.4	5.33	0.00	187
General Office Building	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	76.2
Total	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	27.3	0.00	27.3	2.72	0.00	95.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	72.0	0.00	72.0	7.20	0.00	252
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.83	0.00	8.83	0.88	0.00	30.9

General Office Building	—	—	—	—	—	—	—	—	—	—	3.61	0.00	3.61	0.36	0.00	12.6
Total	—	—	—	—	—	—	—	—	—	—	112	0.00	112	11.2	0.00	391

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	165	0.00	165	16.5	0.00	576
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	435	0.00	435	43.5	0.00	1,522
Strip Mall	—	—	—	—	—	—	—	—	—	—	53.4	0.00	53.4	5.33	0.00	187
General Office Building	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	76.2
Total	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	165	0.00	165	16.5	0.00	576
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	435	0.00	435	43.5	0.00	1,522
Strip Mall	—	—	—	—	—	—	—	—	—	—	53.4	0.00	53.4	5.33	0.00	187

General Office Building	—	—	—	—	—	—	—	—	—	—	21.8	0.00	21.8	2.18	0.00	76.2
Total	—	—	—	—	—	—	—	—	—	—	675	0.00	675	67.4	0.00	2,361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	27.3	0.00	27.3	2.72	0.00	95.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	72.0	0.00	72.0	7.20	0.00	252
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.83	0.00	8.83	0.88	0.00	30.9
General Office Building	—	—	—	—	—	—	—	—	—	—	3.61	0.00	3.61	0.36	0.00	12.6
Total	—	—	—	—	—	—	—	—	—	—	112	0.00	112	11.2	0.00	391

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.84
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	106

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.84
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	106
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.47
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.6
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.1

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.84
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	106
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.84
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	106
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartment Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.47
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.6
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.1

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequester	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	1,875	1,875	1,875	684,382	18,159	18,159	18,159	6,627,917
High Turnover (Sit Down Restaurant)	7,272	7,272	7,272	2,654,326	24,021	60,776	60,776	12,600,648
Strip Mall	8,909	8,909	8,909	3,251,885	74,458	74,458	74,458	27,177,052
General Office Building	471	471	471	172,021	3,939	3,939	3,939	1,437,636

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	1,875	1,875	1,875	684,382	18,159	18,159	18,159	6,627,917
High Turnover (Sit Down Restaurant)	7,132	7,132	7,132	2,603,205	23,558	59,605	59,605	12,357,966
Strip Mall	8,738	8,738	8,738	3,189,255	73,024	73,024	73,024	26,653,636
General Office Building	462	462	462	168,708	3,863	3,863	3,863	1,409,948

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0

Gas Fireplaces	351
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	62
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	351
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	62
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
802872	267,624	308,403	102,801	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,513,989	532	0.0330	0.0040	4,587,126
High Turnover (Sit Down Restaurant)	2,349,217	532	0.0330	0.0040	7,810,183
Strip Mall	926,037	532	0.0330	0.0040	564,497
General Office Building	774,773	532	0.0330	0.0040	1,101,988

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,401,694	532	0.0330	0.0040	0.00
High Turnover (Sit Down Restaurant)	1,897,044	532	0.0330	0.0040	7,758,239

Strip Mall	799,124	532	0.0330	0.0040	558,092
General Office Building	672,960	532	0.0330	0.0040	963,712

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	15,498,093	0.00
High Turnover (Sit Down Restaurant)	20,590,816	0.00
Strip Mall	6,984,150	0.00
General Office Building	7,727,330	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	12,418,622	0.00
High Turnover (Sit Down Restaurant)	18,684,107	0.00
Strip Mall	6,411,450	0.00
General Office Building	7,008,688	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	305	—
High Turnover (Sit Down Restaurant)	807	—
Strip Mall	99.0	—
General Office Building	40.4	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	305	—
High Turnover (Sit Down Restaurant)	807	—
Strip Mall	99.0	—
General Office Building	40.4	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	The project site is approximately 11.80 acres.
Operations: Vehicle Data	The proposed project would generate approximately 18,528 average daily trips.
Operations: Hearths	Assuming no wood burning hearths or wood stoves.

Enderle Center - Existing Uses Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Enderle Center - Existing Uses
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	18.6
Location	17350 17th St, Tustin, CA 92780, USA
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5961
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
High Turnover (Sit Down Restaurant)	28.8	1000sqft	2.00	28,750	0.00	—	—	—

Strip Mall	40.0	1000sqft	2.00	39,960	0.00	—	—	—
General Office Building	18.4	1000sqft	0.80	18,426	0.00	—	—	—
Parking Lot	7.00	Acre	7.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	26.5	18.5	197	0.47	0.38	41.7	42.1	0.36	10.6	10.9	245	51,309	51,554	27.1	1.93	53,045
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.6	20.0	181	0.45	0.37	41.7	42.1	0.35	10.6	10.9	245	49,474	49,718	27.2	2.03	51,053
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.0	17.6	162	0.37	0.33	33.5	33.8	0.31	8.49	8.80	245	41,600	41,845	27.0	1.76	43,157
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.56	3.22	29.5	0.07	0.06	6.11	6.17	0.06	1.55	1.61	40.5	6,887	6,928	4.46	0.29	7,145

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	23.7	17.4	192	0.46	0.29	41.7	42.0	0.27	10.6	10.9	—	46,966	46,966	2.25	1.84	47,763
Area	2.75	0.03	3.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	15.6	15.6	< 0.005	< 0.005	15.6
Energy	0.06	1.08	0.91	0.01	0.08	—	0.08	0.08	—	0.08	—	4,178	4,178	0.29	0.02	4,193
Water	—	—	—	—	—	—	—	—	—	—	28.7	148	177	2.95	0.07	272
Waste	—	—	—	—	—	—	—	—	—	—	216	0.00	216	21.6	0.00	757
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.2
Total	26.5	18.5	197	0.47	0.38	41.7	42.1	0.36	10.6	10.9	245	51,309	51,554	27.1	1.93	53,045
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	23.4	19.0	180	0.44	0.29	41.7	42.0	0.27	10.6	10.9	—	45,147	45,147	2.36	1.93	45,786
Area	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.06	1.08	0.91	0.01	0.08	—	0.08	0.08	—	0.08	—	4,178	4,178	0.29	0.02	4,193
Water	—	—	—	—	—	—	—	—	—	—	28.7	148	177	2.95	0.07	272
Waste	—	—	—	—	—	—	—	—	—	—	216	0.00	216	21.6	0.00	757
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.2
Total	25.6	20.0	181	0.45	0.37	41.7	42.1	0.35	10.6	10.9	245	49,474	49,718	27.2	2.03	51,053
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	22.4	16.5	158	0.37	0.24	33.5	33.7	0.23	8.49	8.72	—	37,263	37,263	2.11	1.67	37,880
Area	2.56	0.02	2.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	10.7
Energy	0.06	1.08	0.91	0.01	0.08	—	0.08	0.08	—	0.08	—	4,178	4,178	0.29	0.02	4,193
Water	—	—	—	—	—	—	—	—	—	—	28.7	148	177	2.95	0.07	272
Waste	—	—	—	—	—	—	—	—	—	—	216	0.00	216	21.6	0.00	757

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.2
Total	25.0	17.6	162	0.37	0.33	33.5	33.8	0.31	8.49	8.80	245	41,600	41,845	27.0	1.76	43,157
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.09	3.02	28.9	0.07	0.04	6.11	6.15	0.04	1.55	1.59	—	6,169	6,169	0.35	0.28	6,272
Area	0.47	< 0.005	0.47	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.77	1.77	< 0.005	< 0.005	1.77
Energy	0.01	0.20	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	692	692	0.05	< 0.005	694
Water	—	—	—	—	—	—	—	—	—	—	4.75	24.6	29.3	0.49	0.01	45.0
Waste	—	—	—	—	—	—	—	—	—	—	35.8	0.00	35.8	3.58	0.00	125
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.49
Total	4.56	3.22	29.5	0.07	0.06	6.11	6.17	0.06	1.55	1.61	40.5	6,887	6,928	4.46	0.29	7,145

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	10.3	7.61	84.1	0.20	0.13	18.2	18.4	0.12	4.63	4.74	—	20,510	20,510	0.98	0.80	20,858
Strip Mall	12.7	9.32	103	0.25	0.16	22.3	22.5	0.14	5.67	5.81	—	25,127	25,127	1.20	0.98	25,553
General Office Building	0.67	0.49	5.45	0.01	0.01	1.18	1.19	0.01	0.30	0.31	—	1,329	1,329	0.06	0.05	1,352

Parking Lot	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
Total	23.7	17.4	192	0.46	0.29	41.7	42.0	0.27	10.6	10.9	—	46,966	46,966	2.25	1.84	47,763
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	10.2	8.28	78.6	0.19	0.13	18.2	18.4	0.12	4.63	4.74	—	19,715	19,715	1.03	0.84	19,995
Strip Mall	12.5	10.1	96.2	0.24	0.16	22.3	22.5	0.14	5.67	5.81	—	24,154	24,154	1.26	1.03	24,496
General Office Building	0.66	0.54	5.09	0.01	0.01	1.18	1.19	0.01	0.30	0.31	—	1,278	1,278	0.07	0.05	1,296
Parking Lot	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
Total	23.4	19.0	180	0.44	0.29	41.7	42.0	0.27	10.6	10.9	—	45,147	45,147	2.36	1.93	45,786
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	1.69	1.05	9.99	0.02	0.01	1.87	1.88	0.01	0.47	0.49	—	1,913	1,913	0.13	0.10	1,948
Strip Mall	2.27	1.87	18.0	0.04	0.03	4.03	4.05	0.03	1.02	1.05	—	4,042	4,042	0.21	0.17	4,106
General Office Building	0.12	0.10	0.95	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	214	214	0.01	0.01	217
Parking Lot	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
Total	4.09	3.02	28.9	0.07	0.04	6.11	6.15	0.04	1.55	1.59	—	6,169	6,169	0.35	0.28	6,272

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451	0.09	0.01	1,457
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	572	572	0.04	< 0.005	574
General Office Building	—	—	—	—	—	—	—	—	—	—	—	479	479	0.03	< 0.005	480
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	389	389	0.02	< 0.005	391
Total	—	—	—	—	—	—	—	—	—	—	—	2,891	2,891	0.18	0.02	2,902
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451	0.09	0.01	1,457
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	572	572	0.04	< 0.005	574
General Office Building	—	—	—	—	—	—	—	—	—	—	—	479	479	0.03	< 0.005	480
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	389	389	0.02	< 0.005	391
Total	—	—	—	—	—	—	—	—	—	—	—	2,891	2,891	0.18	0.02	2,902
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	240	240	0.01	< 0.005	241

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	94.7	94.7	0.01	< 0.005	95.1
General Office Building	—	—	—	—	—	—	—	—	—	—	—	79.2	79.2	< 0.005	< 0.005	79.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	64.5	64.5	< 0.005	< 0.005	64.7
Total	—	—	—	—	—	—	—	—	—	—	—	479	479	0.03	< 0.005	480

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.05	0.89	0.75	0.01	0.07	—	0.07	0.07	—	0.07	—	1,061	1,061	0.09	< 0.005	1,064
Strip Mall	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	76.7	76.7	0.01	< 0.005	76.9
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	150	150	0.01	< 0.005	150
Parking Lot	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
Total	0.06	1.08	0.91	0.01	0.08	—	0.08	0.08	—	0.08	—	1,287	1,287	0.11	< 0.005	1,291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.05	0.89	0.75	0.01	0.07	—	0.07	0.07	—	0.07	—	1,061	1,061	0.09	< 0.005	1,064
Strip Mall	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	76.7	76.7	0.01	< 0.005	76.9

General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	150	150	0.01	< 0.005	150
Parking Lot	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
Total	0.06	1.08	0.91	0.01	0.08	—	0.08	0.08	—	0.08	—	1,287	1,287	0.11	< 0.005	1,291
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.01	0.16	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	176	176	0.02	< 0.005	176
Strip Mall	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.7	12.7	< 0.005	< 0.005	12.7
General Office Building	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.8	24.8	< 0.005	< 0.005	24.8
Parking Lot	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
Total	0.01	0.20	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	213	213	0.02	< 0.005	214

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	0.62	0.03	3.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	15.6	15.6	< 0.005	< 0.005	15.6
Total	2.75	0.03	3.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	15.6	15.6	< 0.005	< 0.005	15.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.08	< 0.005	0.47	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.77	1.77	< 0.005	< 0.005	1.77
Total	0.47	< 0.005	0.47	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.77	1.77	< 0.005	< 0.005	1.77

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	16.7	86.6	103	1.72	0.04	159
Strip Mall	—	—	—	—	—	—	—	—	—	—	5.67	29.4	35.0	0.58	0.01	53.8
General Office Building	—	—	—	—	—	—	—	—	—	—	6.28	32.5	38.8	0.65	0.02	59.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	28.7	148	177	2.95	0.07	272
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	16.7	86.6	103	1.72	0.04	159
Strip Mall	—	—	—	—	—	—	—	—	—	—	5.67	29.4	35.0	0.58	0.01	53.8
General Office Building	—	—	—	—	—	—	—	—	—	—	6.28	32.5	38.8	0.65	0.02	59.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	28.7	148	177	2.95	0.07	272
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	2.77	14.3	17.1	0.28	0.01	26.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.94	4.86	5.80	0.10	< 0.005	8.91
General Office Building	—	—	—	—	—	—	—	—	—	—	1.04	5.38	6.42	0.11	< 0.005	9.86

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	4.75	24.6	29.3	0.49	0.01	45.0

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	184	0.00	184	18.4	0.00	645
Strip Mall	—	—	—	—	—	—	—	—	—	—	22.6	0.00	22.6	2.26	0.00	79.1
General Office Building	—	—	—	—	—	—	—	—	—	—	9.24	0.00	9.24	0.92	0.00	32.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	216	0.00	216	21.6	0.00	757
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	184	0.00	184	18.4	0.00	645
Strip Mall	—	—	—	—	—	—	—	—	—	—	22.6	0.00	22.6	2.26	0.00	79.1

General Office Building	—	—	—	—	—	—	—	—	—	—	9.24	0.00	9.24	0.92	0.00	32.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	216	0.00	216	21.6	0.00	757
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	30.5	0.00	30.5	3.05	0.00	107
Strip Mall	—	—	—	—	—	—	—	—	—	—	3.74	0.00	3.74	0.37	0.00	13.1
General Office Building	—	—	—	—	—	—	—	—	—	—	1.53	0.00	1.53	0.15	0.00	5.35
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	35.8	0.00	35.8	3.58	0.00	125

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.9
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.9
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.44
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.49

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

High Turnover (Sit Down Restaurant)	3,082	3,082	3,082	1,124,930	10,180	25,757	25,757	5,340,281
Strip Mall	3,776	3,776	3,776	1,378,174	31,556	31,556	31,556	11,517,849
General Office Building	200	200	200	72,904	1,669	1,669	1,669	609,285
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	130,704	43,568	18,295

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)

High Turnover (Sit Down Restaurant)	995,622	532	0.0330	0.0040	3,310,034
Strip Mall	392,462	532	0.0330	0.0040	239,238
General Office Building	328,357	532	0.0330	0.0040	467,034
Parking Lot	267,110	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
High Turnover (Sit Down Restaurant)	8,726,594	0.00
Strip Mall	2,959,938	0.00
General Office Building	3,274,922	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
High Turnover (Sit Down Restaurant)	342	—
Strip Mall	42.0	—
General Office Building	17.1	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	The project site is approximately 11.80 acres. Of the site area, 7 acres within the southeastern portion of the project site have been identified as suitable for housing development. These 7 acres are currently made up of paved parking areas.

Operations: Vehicle Data	The existing uses generate approximately 7,058 average daily trips.
Operations: Hearths	Assuming no wood burning hearths.

APPENDIX B

DETAILED ENERGY CALCULATIONS

Construction Off-Road Equipment										
Phase	**Off-Road Equipment Type**	**Amount**	**Usage Hour/Day**	**Total Usage Days**	**Total Usage Hours/Equipment**	**Horsepower**	**Load Factor**	**Total Usage Hours/ Equipment**	**Horsepower-Hour**	**Fuel Usage (gallons)**
Demolition	Concrete/Industrial Saws	1	8	20	160	33	0.73	160	3854.4	197.34528
	Excavators	3	8	20	480	36	0.38	480	6566.4	336.19968
	Rubber Tired Dozers	2	8	20	320	367	0.4	320	46976	2405.1712
Site Preparation	Rubber Tired Dozers	3	8	10	240	367	0.4	240	35232	1803.8784
	Tractors/Loaders/Backhoes	4	8	10	320	84	0.37	320	9945.6	509.21472
Grading	Excavators	2	8	30	480	36	0.38	480	6566.4	336.19968
	Graders	1	8	30	240	148	0.41	240	14563.2	745.63584
	Rubber Tired Dozers	1	8	30	240	367	0.4	240	35232	1803.8784
	Scrapers	2	8	30	480	423	0.48	480	97459.2	4989.91104
	Tractors/Loaders/Backhoes	2	8	30	480	84	0.37	480	14918.4	763.82208
Building Construction	Cranes	1	7	300	2100	367	0.29	2100	223503	11443.3536
	Forklifts	3	8	300	7200	82	0.2	7200	118080	6045.696
	Generator Sets	1	8	300	2400	14	0.74	2400	24864	1273.0368
	Tractors/Loaders/Backhoes	3	7	300	6300	84	0.37	6300	195804	10025.1648
	Welders	1	8	300	2400	46	0.45	2400	49680	2543.616
Paving	Pavers	2	8	20	320	81	0.42	320	10886.4	557.38368
	Paving Equipment	2	8	20	320	89	0.36	320	10252.8	524.94336
	Rollers	2	8	20	320	36	0.38	320	4377.6	224.13312
Architectural Coating	Air Compressors	1	6	100	600	37	0.48	600	10656	545.5872
									Total	**47074.17088** Diesel

Construction Truck and Construction Worker Vehicle Fuel Efficiency				
		EMFAC 2021 Outputs		
Vehicle Type	Vehicle Class	Fuel Consumption (1,000 gallons/day)	VMT (miles/ day)	Fuel Efficency (miles/gallon)
Construction Truck	MHDT	129.3	1,155,908.7	8.9
	HHDT	202.3	1,220,548.3	6.0
	HHDT/MHDT	-	-	7.5
Construction Worker Vehicle	LDA	1408.4	42,285,386.1	30.0
	LDT1	139.0	3,495,530.4	25.2
	LDT2	872.9	21,321,177.5	24.4
	Worker Mix	-	-	27.4

Notes:

[1] For construction trucks assumes 50 percent HHDT and 50 percent MHDT vehicles, consistent with assumptions in CalEEMod for hauling trucks. For construction worker vehicles assumes 50 percent LDA, 25 percent LDT1, and 25 percent LDT2 vehicles, consistent with assumptions in CalEEMod for worker vehicles.

[2] EMFAC2021 was run for Orange County for the construction year 2024. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Vehicle Fuel Use - Diesel Vehicles						
Phase	Trip Type	Total Trips	Trip Length (miles)	Total VMT	Diesel Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Demolition	Hauling	5,520.0	20.0	110,400.0	6.0	18,298.3
Building Construction	Vendor	38,400.0	10.2	391,680.0	7.5	52,317.8
					Total	**70,616.1**

Diesel

[1] Assumes 100 percent HHDT vehicles for haul trucks and 50 percent HHDT/50 percent MHDT vehicles for MHDT, consistent with assumptions in CalEEMod.

[2] EMFAC2021 was run for Orange County for the construction year 2024. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Worker Vehicle Fuel Use - Gasoline Vehicles							
Phase	Total One-Way Trips/Day	Total Days	Total Trips	Trip Length (miles)	Total VMT	Gasoline Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Demolition	15	20	600	18.5	11,100	27.4	405.0
Site Preparation	18	10	360	18.5	6,660	27.4	243.0
Grading	20	30	1,200	18.5	22,200	27.4	810.0
Building Construction	339	300	203,400	18.5	3,762,900	27.4	137,301.7
Paving	15	20	600	18.5	11,100	27.4	405.0
Architectural Coating	68	100	13,600	18.5	251,600	27.4	9,180.4
						Total	**148,345.3**

Gas

Total Construction Gasoline Usage	148,345.3
Total Construction Diesel Usage	117,690.3

Proposed Project Operational Trips			
Vehicle Class	CalEEMod	Total Project Trips	Total Trips per Vehicle Class
LDA	50.24%	18,528	9,308.5
LDT1	22.92%	18,528	4,246.6
LDT2	2.71%	18,528	502.1
MDV	14.42%	18,528	2,671.7
LHD1	4.22%	18,528	781.9
LHD2	0.69%	18,528	127.8
MHD	1.52%	18,528	281.6
HHD	0.54%	18,528	100.1
OBUS	0.06%	18,528	11.1
UBUS	0.04%	18,528	7.4
MCY	2.16%	18,528	400.2
SBUS	0.10%	18,528	18.5
MH	0.39%	18,528	72.3

Proposed Project Operational Trips – Fuel Efficiency						
Fuel	Vehicle Class	EMFAC2021 Outputs1				
		Fleet Mix (%)2	Fuel Consumption (1,000 gallons/day)	VMT (miles/day)	Fuel Efficiency3 (miles/gallon)	
Gas	LDA	52%	1408.4	42,285,386.1	30.0	15.5
	LDT1	4%	139.0	3,495,530.4	25.2	1.1
	LDT2	26%	872.9	21,321,177.5	24.4	6.4
	MDV	15%	635.4	12,620,485.4	19.9	3.1
	LHD1	2%	118.3	1,661,882.0	14.0	0.3
	MCY	0%	7.6	321,576.6	42.2	0.2
	MH	0%	12.0	58,495.6	4.9	0.0
	Fleet Mix	–	–	–	26.5	26.5
Diesel	LHD2	14%	22.4	391,527.7	17.5	2.5
	MHDT	42%	129.3	1,155,908.7	8.9	3.7
	HHDT	44%	202.3	1,220,548.3	6.0	2.7
	Fleet Mix	–	–	–	8.9	8.9

Notes:

[1] EMFAC2021 was run for Orange County for the year 2024. Data was aggregated over all vehicle model years and speed bins.

[2] Fleet mix is based on assumptions made in CalEEMod for the proposed project.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Proposed Project Operational Trips – Fuel Usage						
Land Use	Total Annual VMT2 (miles/year)	Fuel Type	Portion of Fleet3 (%)	VMT by Fuel Type (miles/year)	Fleet Mix Efficiency4 (miles/gallon)	Fuel Usage (gallons/ year)
Apartments Mid Rise	6,627,917.00	Gas	97.2%	6,442,335.3	26.5	243,177.6
		Diesel	2.8%	182,267.7	8.9	20,566.1
High Turnover Restaurant	12,600,648.00	Gas	97.2%	12,247,829.9	26.5	462,316.5
		Diesel	2.8%	346,517.8	8.9	39,099.1
Strip Mall	27,177,052.00	Gas	97.2%	26,416,094.5	26.5	997,123.4
		Diesel	2.8%	747,368.9	8.9	84,328.9
General Office Building	1,437,636.00	Gas	97.2%	1,397,382.2	26.5	52,746.7
		Diesel	2.8%	39,535.0	8.9	4,460.9
					Total Gasoline/year	**1,755,364.2**
					Total Diesel/year	**148,454.9**

Notes:

[1] Calculated for year 2024 only. Future years will likely use less fuel due to more efficient cars.

[2] Total VMT is based on project's trip generation and trip lengths.

[3] Fleet distribution is based on EMFAC2021 output and CalEEMod assumptions.

[4] Fuel efficiency is based on fuel consumption and VMT data from EMFAC2021 for Orange County and total VMT.

Proposed Project Electricity Usage	
Electricity by Land Use	**kWh/year**
Apartments Mid Rise	1,513,989
High Turnover Restaurant	2,349,217
Strip Mall	926,037
General Office Building	774,773
Total	**5,564,016**

Proposed Project Natural Gas Usage			
Natural Gas by Land Use	**kBTU/year**	**BTU/year**	**therms/year**
Apartments Mid Rise	4,587,126	4,587,126,000	45,880
High Turnover Restaurant	7,810,183	7,810,183,000	78,117
Strip Mall	564,497	564,497,000	5,646
General Office Building	1,101,988	1,101,988,000	11,022
Total	**14,063,794**	**14,063,794,000**	**140,666**

Existing Uses Operational Trips			
Vehicle Class	CalEEMod	Total Project Trips	Total Trips per Vehicle Class
LDA	50.24%	7,058	3,545.9
LDT1	4.22%	7,058	297.8
LDT2	22.92%	7,058	1,617.7
MDV	14.42%	7,058	1,017.8
LHD1	2.71%	7,058	191.3
LHD2	0.69%	7,058	48.7
MHD	1.52%	7,058	107.3
HHD	0.54%	7,058	38.1
OBUS	0.06%	7,058	4.2
UBUS	0.04%	7,058	2.8
MCY	2.16%	7,058	152.5
SBUS	0.10%	7,058	7.1
MH	0.39%	7,058	27.5

Existing Uses Operational Trips – Fuel Efficiency						
Fuel	Vehicle Class	EMFAC2021 Outputs1				
		Fleet Mix (%)2	Fuel Consumption (1,000 gallons/day)	VMT (miles/day)	Fuel Efficiency3 (miles/gallon)	
Gas	LDA	52%	1408.4	42,285,386.1	30.0	15.5
	LDT1	4%	139.0	3,495,530.4	25.2	1.1
	LDT2	26%	872.9	21,321,177.5	24.4	6.4
	MDV	15%	635.4	12,620,485.4	19.9	3.1
	LHD1	2%	118.3	1,661,882.0	14.0	0.3
	MCY	0%	7.6	321,576.6	42.2	0.2
	MH	0%	12.0	58,495.6	4.9	0.0
	Fleet Mix	–	–	–	26.5	26.5
Diesel	LHD2	14%	22.4	391,527.7	17.5	2.5
	MHDT	42%	129.3	1,155,908.7	8.9	3.7
	HHDT	44%	202.3	1,220,548.3	6.0	2.7
	Fleet Mix	–	–	–	8.9	8.9

Notes:

[1] EMFAC2021 was run for Orange County for the year 2024. Data was aggregated over all vehicle model years and speed bins.

[2] Fleet mix is based on assumptions made in CalEEMod for the proposed project.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Existing Uses Operational Trips – Fuel Usage						
Land Use	Total Annual VMT2 (miles/year)	Fuel Type	Portion of Fleet3 (%)	VMT by Fuel Type (miles/year)	Fleet Mix Efficiency4 (miles/gallon)	Fuel Usage (gallons/ year)
High Turnover Restaurant	5,340,281.00	Gas	97.2%	5,190,753.1	26.5	195,934.4
		Diesel	2.8%	146,857.7	8.9	16,570.6
Strip Mall	11,517,849.00	Gas	97.2%	11,195,349.2	26.5	422,588.7
		Diesel	2.8%	316,740.8	8.9	35,739.2
General Office Building	609,285.00	Gas	97.2%	592,225.0	26.5	22,354.6
		Diesel	2.8%	16,755.3	8.9	1,890.6
					Total Gasoline/year	**640,877.7**
					Total Diesel/year	**54,200.4**

Notes:

[1] Calculated for year 2024 only. Future years will likely use less fuel due to more efficient cars.

[2] Total VMT is based on project's trip generation and trip lengths.

[3] Fleet distribution is based on EMFAC2021 output and CalEEMod assumptions.

[4] Fuel efficiency is based on fuel consumption and VMT data from EMFAC2021 for Orange County and total VMT.

Existing Uses Electricity Usage	
Electricity by Land Use	**kWh/year**
High Turnover Restaurant	995,622
Strip Mall	392,462
General Office Building	328,357
Parking Lot	267,770
Total	**1,984,211**

Existing Uses Natural Gas Usage			
Natural Gas by Land Use	**kBTU/year**	**BTU/year**	**therms/year**
High Turnover Restaurant	3,310,034	3,310,034,000	33,107
Strip Mall	239,238	239,238,000	2,393
General Office Building	467,034	467,034,000	4,671
Total	**4,016,306**	**4,016,306,000**	**40,171**

Appendix C
Noise and Vibration Impact Analysis

NOISE AND VIBRATION IMPACT ANALYSIS

ENDERLE CENTER PROJECT

CITY OF TUSTIN, CALIFORNIA

LSA

March 2024

NOISE AND VIBRATION IMPACT ANALYSIS

ENDERLE CENTER PROJECT

CITY OF TUSTIN, CALIFORNIA

Submitted to:

EPD Solutions, Inc.
3333 Michelson Drive, Suite 500
Irvine, California 92612

Prepared by:

LSA
3210 El Camino Real, Suite 100
Irvine, California 92602
(949) 553-0666

Project No. ESL2201.76

March 2024

TABLE OF CONTENTS

TABLE OF CONTENTS i
LIST OF ABBREVIATIONS AND ACRONYMS iii
PROJECT LOCATION 5
PROJECT DESCRIPTION 5
EXISTING LAND USES IN THE PROJECT AREA 8
CHARACTERISTICS OF SOUND 10
MEASUREMENT OF SOUND 10
Physiological Effects of Noise 11
FUNDAMENTALS OF VIBRATION 13
APPLICABLE NOISE STANDARDS 15
California Code of Regulations 15
City of Tustin 15
Federal Transit Administration 17
APPLICABLE VIBRATION STANDARDS 17
Federal Transit Administration 17
AMBIENT NOISE MEASUREMENTS 19
Long-Term Noise Measurements 19
EXISTING AIRCRAFT NOISE 19
SHORT-TERM CONSTRUCTION NOISE IMPACTS 21
SHORT-TERM CONSTRUCTION VIBRATION IMPACTS 24
LONG-TERM OFF-SITE TRAFFIC NOISE IMPACTS 26
LONG-TERM TRAFFIC-RELATED VIBRATION IMPACTS 26
LONG-TERM STATIONARY NOISE IMPACTS 26
EXTERIOR NOISE ASSESSMENT 28
INTERIOR NOISE ASSESSMENT 28

APPENDICES

A: Noise Monitoring Sheets
B: Construction Noise Level Calculations
C: FHWA Traffic Noise Model Printouts

FIGURES AND TABLES

FIGURES

Figure 1: Project Location 6
Figure 2: Project Site 7
Figure 3: Noise Monitoring Locations 20

TABLES

Table A: Definitions of Acoustical Terms 12
Table B: Common Sound Levels and Their Noise Sources 13
Table C: City of Tustin Interior and Exterior Noise Standards 15
Table D: City of Tustin Maximum Noise Level Standards 16
Table E: General Assessment Construction Noise Criteria 17
Table F: Interpretation of Vibration Criteria for Detailed Analysis 17
Table G: Construction Vibration Damage Criteria 18
Table H: Long-Term 24-Hour Ambient Noise Monitoring Results[1] 19
Table I: Typical Construction Equipment Noise Levels 22
Table J: Potential Construction Noise Impacts at Nearest Receptor 23
Table K: Vibration Source Amplitudes for Construction Equipment 24
Table L: Potential Construction Vibration Annoyance Impacts at Nearest Receptor 25
Table M: Potential Construction Vibration Damage Impacts at Nearest Receptor 25
Table N: Traffic Noise Levels Without and With Proposed Project 27

LIST OF ABBREVIATIONS AND ACRONYMS

APN	Assessor's Parcel Numbers
City	City of Tustin
CNEL	Community Noise Equivalent Level
County	County of Orange
dBA	A-weighted decibel
du/ac	dwelling units per acre
FHWA	Federal Highway Administration
ft	foot/feetFeet
FTA	Federal Transit Administration
GPA	General Plan Amendment
HOD	Housing Overlay District
HVAC	heating, ventilation, and air conditioning
in/sec	inches per second
JWA	John Wayne Airport
L_{dn}	day-night average noise level
L_{eq}	equivalent continuous sound level
L_{max}	maximum instantaneous sound level
PC COM	Planned Community Commercial
PCCB	Planned Community Commercial/ Business
PPV	peak particle velocity
project	Enderle Center Project
RHNA	Regional Housing Needs Allocation
RMS	root-mean-square
sf	square feet

SR-55	State Roue 55
STC	Sound Transmission Class
TMC	Tustin Municipal Code
VdB	vibration velocity decibels
ZC	Zone Change
ZCA	Zoning Code Amendment

INTRODUCTION

This noise and vibration impact analysis has been prepared to evaluate the potential noise and vibration impacts and reduction measures associated with the Enderle Center Project (project) in Tustin, California. This report is intended to satisfy the City of Tustin (City) requirement for a project-specific noise impact analysis by examining the impacts of the project site and evaluating noise reduction measures that the project may require.

PROJECT LOCATION

The 11.8-acre project site consists of Assessor's Parcel Numbers (APNs) 401-251-04, -06; 401-252-05, -06, -08, -09, -10; and 401-253-04 and -03. The project site is generally bounded on the north by 17th Street; on the east by Enderle Center Drive and the eastern property line of properties fronting Enderle Center Drive; to the south by Vandenberg Lane; and to the west by State Roue 55 (SR-55), including properties west of Yorba Street. The project location is shown in Figure 1.

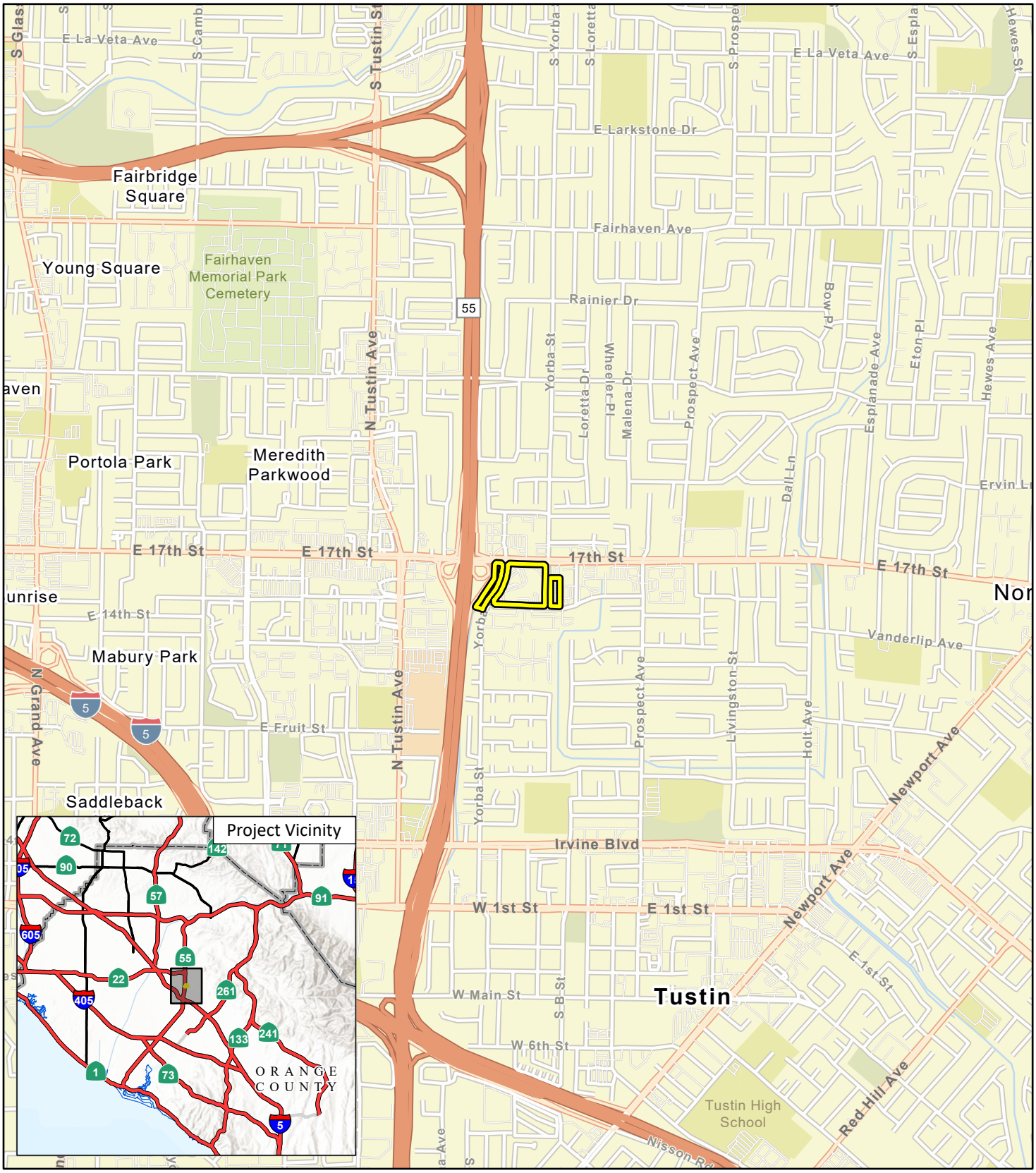
The Enderle Center is currently developed with 87,136 square feet (sf) of commercial business uses, including 28,750 sf of restaurant use, 39,960 sf of retail and service use, 18,426 sf of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas. See Figure 2.

The project site has a General Plan land use designation of Planned Community Commercial/ Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). The PCCB land use designation provides opportunities for a variety of miscellaneous retail, professional office, and service-oriented business activities. The PC COM zoning is intended to allow diversification of the relationships of various buildings, structures and open spaces in planned building groups while ensuring substantial compliance with the housing district regulations and other provisions of the Planned Community District zone.

PROJECT DESCRIPTION

The City of Tustin prepared the 2021–2029 Housing Element of its General Plan in accordance with Government Code Section 65580 et seq. The City is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The update to the Housing Element covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029.

The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA). During the Housing Element process, the City assessed a number of properties and areas throughout the community that would be able to accommodate the City's assigned RHNA. Of the Housing Element inventory sites, Enderle Center (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development.



LSA

FIGURE 1

SOURCE: Esri World Street Map (2024)

J:\ESL2201.76\GIS\Pro\Enderle Center Project\Enderle Center Project.aprx (3/26/2024)

Enderle Center Project

Regional Project Location

LSA

Project Location

FIGURE 2

N

0 100 200
FEET

SOURCE: Google Maps (2023)

Enderle Center Project

Project Site

J:\ESL2201.76\GIS\Pro\Enderle Center Project\Enderle Center Project.aprx (3/26/2024)

Pursuant to Housing Element Program 1.1f, the City is proposing an overlay zone (overlay district) for the project site. To accommodate this, a General Plan Amendment (GPA) is needed to allow a Housing Overlay District (residential uses) within Planned Community Commercial/Business land use designations; a Zoning Code Amendment (ZCA) to establish Housing Overlay Districts (overlay zone) in conjunction with the Planned Community Commercial Districts (base zone); and a Zone Change (ZC) that amends the City's zoning map to apply a Housing Overlay District (HOD) to the project site. The proposed HOD would allow for residential development with a maximum density of 59 dwelling units per acre (du/ac) over a maximum development area of 7 acres.

The Housing Element identified the Enderle Center as having capacity for 413 housing units. The anticipated development density was determined through the Housing Element process, and is a conservative estimate based on development trends in nearby communities. The anticipated development does not rely on the demolition of any existing building, but rather focuses on areas used for surface parking. No development is proposed as part of this project.

During the Housing Element process, the City identified the Enderle Center as a suitable commercial site for rezoning to allow mixed-use development, which would introduce the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. This would be accomplished with a Housing Overlay Zone. The proposed project includes a GPA to amend the City's existing General Plan to create a Housing Overlay Zone and establish that the overlay zone will be applied within, and be consistent with, the Planned Community Commercial Business land use designation. The GPA will amend the text within the Land Use Element to clarify the purpose and function of the Housing Overlay Zone, and describe how the Housing Overlay Zone implements the General Plan goals and policies.

Residential uses are currently not allowed on the project site. Upon approval of the Housing Overlay Zone, the project site could accommodate 413 units over approximately 7 acres of developable land within the existing 11.8-acre site. The anticipated development over 7 acres would take place on underutilized asphalt parking lot areas, and not require demolition of any existing buildings. Parking displaced as a result of redevelopment would be accommodated by vertical parking structures located within the proposed development.

Roadways and utilities may be required to support development of future residential construction within the project site. However, specific infrastructure improvements required to support residential development within the Enderle Center are not known at this time and will not be known until a development project is proposed.

EXISTING LAND USES IN THE PROJECT AREA

The project site is surrounded primarily by residential, commercial, and office uses. The areas adjacent to the project site include the following uses:

- **North:** Commercial uses opposite of 17th Street
- **East:** Commercial and office uses opposite of Enderle Center Drive
- **South:** Residential uses opposite of Vandenberg Lane
- **West:** Commercial and office uses opposite of SR-55

The closest sensitive receptors to the project site are residential uses, located approximately 70 feet south of the project's site boundary.

NOISE AND VIBRATION FUNDAMENTALS

CHARACTERISTICS OF SOUND

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a sound wave, which results in the tone's range from high to low. Loudness is the strength of a sound, and it describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity is the average rate of sound energy transmitted through a unit area perpendicular to the direction in which the sound waves are traveling. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

MEASUREMENT OF SOUND

Sound intensity is measured with the A-weighted decibel (dBA) scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound, similar to the human ear's de-emphasis of these frequencies. Decibels (dB), unlike the linear scale (e.g., inches or pounds), are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 dB is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 0 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the sound's loudness. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound levels dissipate exponentially with distance from their noise sources. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source sound levels decrease 4.5 dB for each doubling of distance in a relatively flat environment with absorptive vegetation.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous

sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and Community Noise Equivalent Level (CNEL) or the day-night average noise level (L_{dn}) based on A-weighted decibels. CNEL is the time-weighted average noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the relaxation. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The City of Tustin uses the CNEL noise scale for long-term traffic noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous noise level (L_{max}), which is the highest sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts, which are increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to sound levels higher than 85 dBA. Exposure to high sound levels affects the entire system, with prolonged sound exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of sound exposure above 90 dBA would result in permanent cell damage. When the sound level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of sound is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by a feeling of pain in the ear (i.e., the threshold of pain). A sound level of 160–165 dBA will result in dizziness or a loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less developed areas.

Table A lists definitions of acoustical terms, and Table B shows common sound levels and their sources.

Table A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of sound measurement that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., the number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted unless reported otherwise.)
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period, respectively.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dBA to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time. Usually a composite of sound from many sources from many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Source: Sources: (1) Technical Noise Supplement (Caltrans 2013); (2) Transit Noise and Vibration Impact Assessment Manual (FTA 2018).
Caltrans = California Department of Transportation
FTA = Federal Transit Administration

Table B: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near Freeway Auto Traffic	70	Moderately Loud	Reference level
Average Office	60	Quiet	One-half as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	One-quarter as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	One-eighth as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA (2021).

FUNDAMENTALS OF VIBRATION

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may not be discernible, but without the effects associated with the shaking of a building there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile-driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet (ft) from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 ft (FTA 2018). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic would not exceed the impact criteria; however, construction of the project could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne noise is not likely to be a problem because noise arriving via the normal airborne path will usually be greater than ground-borne noise.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile-driving to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS is best for characterizing human response to building vibration, and PPV is used to characterize the potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. Vibration velocity level in decibels is defined as

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where "L_v" is the vibration velocity in decibels (VdB), "V" is the RMS velocity amplitude, and "V_{ref}" is the reference velocity amplitude, or 1 x 10^{-6} inches/second (in/sec) used in the United States.

REGULATORY SETTING

APPLICABLE NOISE STANDARDS

The applicable noise standards governing the project site include the criteria in the City's Noise Element of the General Plan (Noise Element) and Section 8.24 of the City of Tustin Municipal Code (TMC).

California Code of Regulations

Interior noise levels for residential habitable rooms are regulated by Title 24 of the California Code of Regulations California Noise Insulation Standards. Title 24, Chapter 12, Section 1206.4, of the 2019 California Building Code requires that interior noise levels attributable to exterior sources not exceed 45 CNEL in any habitable room. A habitable room is a room used for living, sleeping, eating, or cooking. Bathrooms, closets, hallways, utility spaces, and similar areas are not considered habitable rooms for this regulation (Title 24 California Code of Regulations, Chapter 12, Section 1206.4).

City of Tustin

Noise Element of the General Plan

The City's General Plan Noise Element (City of Tustin 2012) has established exterior and interior noise standards as shown in Table C. These noise standards apply to approved land uses for which mitigation may be required to achieve the City's noise standards. As shown in Table C, the City has a noise standard of 65 dBA CNEL for exterior habitable areas and a 45 dBA CNEL noise standard for interior habitable areas for residential land uses.

Table C: City of Tustin Interior and Exterior Noise Standards

Land Use	Noise Standards[1]	
	Interior[2,3]	Exterior
Residential: Single-family, multifamily, duplex, mobile home	45 dBA CNEL	65 dBA CNEL[4]
Residential: Transient lodging, hotels, motels, nursing homes, hospitals	45 dBA CNEL	65 dBA CNEL[4]
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting rooms, etc.	45 dBA $L_{eq}(12)$	--
Schools	45 dBA $L_{eq}(12)$	67 dBA $L_{eq}(12)$[5]
General offices, reception, clerical, etc.	50 dBA $L_{eq}(12)$	-
Bank lobby, retail store, restaurant, typing pool, etc.	55 dBA $L_{eq}(12)$	-
Manufacturing, kitchen, warehousing, etc.	65 dBA $L_{eq}(12)$	-
Parks, playgrounds	-	65 dBA CNEL[5]
Golf courses, outdoor spectator sports, amusement parks	-	70 dBA CNEL

Source: Noise Element, Tustin General Plan (City of Tustin 2012).

1 CNEL: Community Noise Equivalent Level. $L_{eq}(12)$: The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation).

2 Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment.

3 Indoor environment excluding bathrooms, toilets, closets, and corridors.

4 Outdoor environment limited to rear yard of single-family homes, multifamily patios, and balconies (with a depth of 6 feet or more) and common recreation areas.

5 Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

dBA = A-weighted decibels

UBC = Uniform Building Code

Municipal Code

Article 4, Chapter 6 of the City's Municipal Code (City of Tustin 2022) establishes the maximum permissible noise level that may intrude into a neighbor's property. The Noise Ordinance establishes noise level standards for various land use categories affected by stationary noise sources. Land use categories in the City are defined by five noise zones, as listed below. Table D provides the City's maximum noise standard based on the noise zone, the location of the noise (exterior/interior), and the time period.

Noise Zone 1: All residential properties

Noise Zone 2: All commercial properties

Noise Zone 3: All industrial properties

Noise Zone 4: All special properties such as hospitals, convalescent homes, public and institutional schools, libraries and churches

Noise Zone 5: All mixed-use properties.

Article 4, Chapter 6 of the City's Municipal Code limits the erection, demolition, alteration, repair, excavation, grading, paving or construction of any building or site to between the hours of 7:00 a.m. and 8:00 p.m. Monday through Friday and 9:00 a.m. and 5:00 p.m. on Saturdays. Construction is prohibited on Sundays and City-observed federal holidays. Trucks, vehicles and equipment that are making or are involved with material deliveries, loading or transfer of materials, equipment service, maintenance of any devices or appurtenances to any construction project in Tustin shall not be operated on or adjacent to said sites outside of the approved hours for construction activity.

Table D: City of Tustin Maximum Noise Level Standards

Noise Zone	Exterior/ Interior	Time Period	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
1	Exterior	7:00 AM to 10:00 PM	55	60	65	70	75
		10:00 PM to 7:00 AM	50	55	60	65	70
	Interior	7:00 AM to 10:00 PM	—	—	55	60	65
		10:00 PM to 7:00 AM	—	—	45	50	55
2	Exterior	Anytime	60	65	70	75	80
3	Exterior	Anytime	70	75	80	85	90
4	Exterior	Anytime	55	60	65	70	75
5	Exterior	Anytime	60	65	70	75	80

Source: Municipal Code (City of Tustin 2018).
Note: It shall be unlawful for any person at any location within the incorporated area of the City of Tustin to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other property to exceed. In the event the alleged offensive noise consists of impact noise, simple tone, speech, music, or any combination thereof, each of the above noise levels shall be reduced by 5 dBA. In the event the ambient noise level exceeds any of the first four noise limit categories, the cumulate period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
dBA = A-weighted decibels
L_{max} = maximum instantaneous noise level
min/mins = minute/minutes

In addition, construction activities may be permitted outside of those limitations in the case of urgent necessity or upon a finding that such approval would not adversely impact adjacent properties and the health, safety and welfare of the community if a temporary exception is granted in writing by the Building Official for private property or by the Director of Public Works for public properties or their authorized representatives. All temporary waiver requests shall be made in writing and shall include the specific times, dates, and locations requested and a description of the type of activity that is proposed. In granting a temporary exception, conditions may be imposed on construction activities to protect the health, safety, and welfare of the community. Any approval granted may be summarily revoked by the Building Official or Director of Public Works at the sole discretion of each official.

Federal Transit Administration

Because the City does not have construction noise level limits, construction noise was assessed using criteria from the Federal Transit Administration's (FTA) 2018 *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual). Table E shows the FTA's General Assessment Construction Noise Criteria based on the composite noise levels per construction phase.

Table E: General Assessment Construction Noise Criteria

Land Use	Daytime 1-hour L_{eq} (dBA)	Nighttime 1-hour L_{eq} (dBA)
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
dBA = A-weighted decibels L_{eq} = equivalent continuous sound level

APPLICABLE VIBRATION STANDARDS

Federal Transit Administration

Vibration standards included in the 2018 FTA Manual are used in this analysis for ground-borne vibration impacts on human annoyance. The criteria for environmental impacts from ground-borne vibration and noise are based on the maximum levels for a single event. Table F provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building.

Table F: Interpretation of Vibration Criteria for Detailed Analysis

Land Use	Max L_v (VdB)[1]	Description of Use
Workshop	90	Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration that can be felt. Appropriate for offices and similar areas not as sensitive to vibration.
Residential Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20×).
Residential Night and Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100×) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] As measured in 1/3-octave bands of frequency over the frequency range 8 to 80 hertz.
FTA = Federal Transit Administration L_V = velocity in decibels
VdB = vibration velocity decibels Max = maximum

Table G lists the potential vibration building damage criteria associated with construction activities, as suggested in the FTA Manual. FTA guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For non-engineered timber and masonry buildings, the construction building vibration damage criterion is 0.2 in/sec in PPV.

Table G: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
FTA = Federal Transit Administration PPV = peak particle velocity
in/sec = inch/inches per second

OVERVIEW OF THE EXISTING NOISE ENVIRONMENT

The primary existing noise sources in the project area are transportation facilities such as Yorba Street, 17th Street, Vandenberg Lane, and Enderle Center Drive and surrounding commercial and office uses.

AMBIENT NOISE MEASUREMENTS

Long-Term Noise Measurements

Long-term (24-hour) noise level measurements were conducted on January 23 and 24, 2024, using two (2) Larson Davis Spark 706RC Dosimeters. Table H provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown in Table H, the calculated CNEL levels range from 66.9 dBA CNEL to 73.7 dBA CNEL. Hourly noise levels at surrounding sensitive uses are as low as 50.4 dBA L_{eq} during nighttime hours and 66.8 dBA L_{eq} during daytime hours. Long-term noise monitoring survey sheets are provided in Appendix A. Figure 3 shows the long-term monitoring locations.

Table H: Long-Term 24-Hour Ambient Noise Monitoring Results[1]

Location		Daytime Noise Levels[1] (dBA L_{eq})	Evening Noise Levels[2] (dBA L_{eq})	Nighttime Noise Levels[3] (dBA L_{eq})	Daily Noise Levels (dBA CNEL)
LT-1	14122 Paseo Verde, Tustin, CA 92780. Located in the front yard of a home on a tree, approximately 60 feet away from the Vandenberg Lane centerline.	64.7-66.8	61.9-64.9	50.4-62.3	66.9
LT-2	14032 Enderle Center Drive, #102, Tustin, CA 92780. Located south of an office building in the parking lot on a light pole, approximately 120 feet away from the Enderle Center Drive centerline.	65.8-68.8	69.4-69.8	62.4-69.2	73.7

Source: Compiled by LSA (2024).
Note: Noise measurements were conducted from January 23 and 24, 2024, starting at 2:00 p.m.
[1] Daytime Noise Levels = noise levels during the hours from 7:00 a.m. to 7:00 p.m.
[2] Evening Noise Levels = noise levels during the hours from 7:00 p.m. to 10:00 p.m.
[3] Nighttime Noise Levels = noise levels during the hours from 10:00 p.m. to 7:00 a.m.
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
CNEL = Community Noise Equivalent Level

EXISTING AIRCRAFT NOISE

Aircraft flyovers may be audible on the project site due to aircraft activity in the vicinity. The nearest airport to the project is John Wayne Airport (JWA), a commercial airport 5.5 miles to the south. The project site is outside the 60 dBA CNEL noise contour of JWA based on the JWA Airport 2022 Annual Community Noise Equivalent Level Contours (County of Orange 2022). Additionally, there are no helipads or private airstrips within 2 miles of the project area. Due to the distance of the project site from the nearest airport, impacts related to aircraft operations are not further discussed in this analysis.

LSA

LEGEND

Project Site Boundary

LT-1 Long-term Noise Monitoring Location

0 100 200

FEET

SOURCE: Google Earth (2024)

I:ESL2201.76\G\Noise_Locs.ai (3/28/2024)

FIGURE 3

Enderle Center

Noise Monitoring Locations

PROJECT IMPACTS

SHORT-TERM CONSTRUCTION NOISE IMPACTS

Two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. Although there would be a relatively high single-event noise-exposure potential causing intermittent noise nuisance (passing trucks at 50 ft would generate up to 84 dBA L_{max}), the effect on longer-term ambient noise levels would be small when compared to existing daily traffic volumes on 17th Street. Because construction-related vehicle trips would not approach existing daily traffic volumes, traffic noise would not increase by 3 dBA CNEL. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term, construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during demolition, excavation, grading, and building erection on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table I lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 ft between the equipment and a noise receptor, taken from the FHWA *Roadway Construction Noise Model* (FHWA 2006).

In addition to the reference maximum noise level, the usage factor provided in Table I is used to calculate the hourly noise level impact for each piece of equipment based on the following equation:

$$L_{eq}(equip) = E.L. + 10\log(U.F.) - 20\log\left(\frac{D}{50}\right)$$

where: $L_{eq}(equip)$ = L_{eq} at a receiver resulting from the operation of a single piece of equipment over a specified time period.

E.L. = noise emission level of the particular piece of equipment at a reference distance of 50 ft.

U.F. = usage factor that accounts for the fraction of time that the equipment is in use over the specified period of time.

D = distance from the receiver to the piece of equipment.

Table I: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (L_{max}) at 50 Feet[2]
Auger Drill Rig	20	84
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Paver	50	77
Pickup Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Trencher	50	80
Welder	40	73

Source: FHWA Roadway Construction Noise Model User's Guide, Table 1 (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
FHWA = Federal Highway Administration
L_{max} = maximum instantaneous sound level

Each piece of construction equipment operates as an individual point source. Using the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Leq\ (composite) = 10 * \log_{10}\left(\sum_{1}^{n} 10^{\frac{Ln}{10}}\right)$$

Using the equations from the methodology above, the reference information in Table I, and the construction equipment list provided, the composite noise level of each construction phase was calculated. The project construction composite noise levels at a distance of 50 ft would range from 74 dBA L_{eq} to 88 dBA L_{eq} with the highest noise levels occurring during the site preparation and grading phases.

Once composite noise levels are calculated, reference noise levels can then be adjusted for distance using the following equation:

$$Leq\ (at\ distance\ X) = Leq\ (at\ 50\ feet) - 20 * \log_{10}\left(\frac{X}{50}\right)$$

In general, this equation shows that doubling the distance would decrease noise levels by 6 dBA while halving the distance would increase noise levels by 6 dBA.

Table J shows the nearest sensitive uses to the project site, their distance from the center of construction activities, and composite noise levels expected during construction. These noise level projections do not take into account intervening topography or barriers. Construction equipment calculations are provided in Appendix B.

Table J: Potential Construction Noise Impacts at Nearest Receptor

Receptor (Location)	Composite Noise Level (dBA L_{eq}) at 50 ft[1]	Distance (ft)	Composite Noise Level (dBA L_{eq})
Residential (South)	88	380	70
Commercial / Office (East)		380	70
Commercial / Office (North)		440	69
Commercial / Office (West)		515	67

Source: Compiled by LSA (2024).

[1] The composite construction noise level represents the grading phase which is expected to result in the greatest noise level as compared to other phases.

dBA L_{eq} = average A-weighted hourly noise level

ft = foot/feet

While construction noise will vary, it is expected that composite noise levels during construction at the nearest off-site sensitive uses to the south would reach 70 dBA L_{eq}. These predicted noise levels would only occur when all construction equipment is operating simultaneously; and therefore, are assumed to be rather conservative in nature. While construction-related short-term noise levels have the potential to be higher than existing ambient noise levels in the project area under existing conditions, the noise impacts would no longer occur once project construction is completed.

As stated above, noise impacts associated with construction activities are regulated by the City's noise ordinance. The proposed project will be required to comply with the construction hours specified in the City's Noise Ordinance, which states that construction activities are allowed between 7:00 a.m. and 8:00 p.m., Monday through Friday, and between 9:00 a.m. and 5:00 p.m. on Saturdays. Construction is prohibited on Sundays and City-observed federal holidays.

As it relates to off-site uses, construction-related noise impacts would remain below the 90 dBA L_{eq} and 100 dBA L_{eq} 1-hour construction noise level criteria as established by the FTA for residential and commercial land uses, respectively, for the average daily conditions as modeled from the center of the project site, and therefore, they would be considered less than significant. Best construction practices presented at the end of this analysis shall be implemented to minimize noise impacts to surrounding receptors.

SHORT-TERM CONSTRUCTION VIBRATION IMPACTS

This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (in/sec). This is because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best for characterizing potential for damage.

Table K shows the PPV and VdB values at 25 ft from the construction vibration source. As shown in Table K, bulldozers and other heavy-tracked construction equipment (expected to be used for this project) generate approximately 0.089 PPV in/sec or 87 VdB of ground-borne vibration when measured at 25 ft, based on the FTA Manual. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project construction boundary (assuming the construction equipment would be used at or near the project setback line).

Table K: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] Equipment shown in **bold** is expected to be used on site.
µin/sec = microinches per second
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inch/inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The formulae for vibration transmission are provided below, and Tables L and M below provide a summary of off-site construction vibration levels.

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

As shown in Table F, above, the threshold at which vibration levels would result in annoyance would be 78 VdB for daytime residential uses. As shown in Table G, the FTA guidelines indicate that for a non-engineered timber and masonry building, the construction vibration damage criterion is 0.2 in/sec in PPV.

Table L: Potential Construction Vibration Annoyance Impacts at Nearest Receptor

Receptor (Location)	Reference Vibration Level (VdB) at 25 ft[1]	Distance (ft) [2]	Vibration Level (VdB)
Residential (South)	87	380	52
Commercial / Office (East)		380	52
Commercial / Office (North)		440	50
Commercial / Office (West)		515	48

Source: Compiled by LSA (2024).
[1] The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the average condition, identified by the distance from the center of construction activities to surrounding uses.
ft = foot/feet
VdB = vibration velocity decibels

Table M: Potential Construction Vibration Damage Impacts at Nearest Receptor

Receptor (Location)	Reference Vibration Level (PPV) at 25 ft[1]	Distance (ft)[2]	Vibration Level (PPV)
Residential (South)	0.089	70	0.019
Commercial / Office (East)		20	0.124
Commercial / Office (North)		140	0.007
Commercial / Office (West)		95	0.012

Source: Compiled by LSA (2024).
[1] The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures.
ft = foot/feet
PPV = peak particle velocity

Based on the information provided in Table L, vibration levels are expected to approach 52 VdB at the closest residential uses located south of the project site, which is below the 78 VdB threshold for annoyance.

The closest structure to the project site is the commercial use to the east of site, approximately 20 ft from the limits of construction activity. It is expected that vibration levels generated by dump trucks and other large equipment that would operate near the property line would generate ground-borne vibration levels of up to 0.124 PPV (in/sec) at the closest structure to the project site. This vibration level would not exceed the 0.2 PPV (in/sec) threshold considered safe for non-engineered timber and masonry buildings. All other structures are further away and would experience lower vibration levels. Therefore, vibration impacts would be less than significant. Because construction activities are regulated by the City's Municipal Code, which states that construction, maintenance, or demolition activities are allowed between the hours of 7:00 a.m. to 8:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays and City-observed federal holidays, vibration impacts would not occur during the more sensitive nighttime hours.

LONG-TERM OFF-SITE TRAFFIC NOISE IMPACTS

The guidelines included in the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77 108) were used to evaluate highway traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Table N provides the traffic noise levels for the opening year and future year with and without project scenarios. These noise levels represent the worst-case scenario, which assumes no shielding is provided between the traffic and the location where the noise contours are drawn.

The without and with project scenario traffic volumes were obtained from the Traffic Impact Analysis (EPD Solutions Inc. 2024). Appendix C provides the specific assumptions used in developing these noise levels and model printouts. Table N shows that the increase in project-related traffic noise would be no greater than 2.9 dBA. Noise level increases less than 3 dBA are not perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from project-related traffic on off-site sensitive receptors would be less than significant, and no mitigation measures are required.

LONG-TERM TRAFFIC-RELATED VIBRATION IMPACTS

The proposed project would not generate vibration levels related to on-site operations. In addition, vibration levels generated from project-related traffic on the adjacent roadways are unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Vibration levels generated from project-related traffic on the adjacent roadways would be less than significant, and no mitigation measures are required.

LONG-TERM STATIONARY NOISE IMPACTS

Adjacent off-site land uses would be potentially exposed to stationary-source noise impacts from sources which include on-site heating, ventilation, and air conditioning (HVAC) equipment, and truck deliveries and loading and unloading activities. It is expected that on-site stationary noise sources would meet the City of Tustin maximum noise level standards as presented previously in Table D.

Once proposed uses are determined and final site plans are available, a Final Acoustical Report would be required to confirm the noise level exposure from stationary sources to off-site sensitive land uses and to identify any specific mitigation measures necessary to achieve an exterior noise level below the City's noise standards.

Table N: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
17th St between SR-55 SB Ramps & SR-55 NB Ramps	39,346	68.9	39,802	68.9	44,963	69.5	0.6	41,852	69.2	47,013	69.7	0.5
17th St between SR-55 NB Ramps & Carroll Way-Yorba St South	38,861	68.8	39,155	68.9	46,611	69.6	0.7	40,478	69.0	47,934	69.7	0.7
17th St between Carroll Way-Yorba St South & Yorba St North-Enderle Center Dr	34,006	68.3	34,151	68.3	39,312	68.9	0.6	34,801	68.4	39,963	69.0	0.6
Yorba St between 17th St & Vandenberg Ln	5,174	60.6	5,607	60.9	10,768	63.8	2.9	7,555	62.2	12,716	64.5	2.3
Enderle Center Dr between 17th St & Vandenberg Ln	3,197	53.6	3,453	53.9	6,320	56.6	2.7	4,604	55.2	7,471	57.3	2.1

Source: Compiled by LSA (2024).
Note: Shaded cells indicate roadway segments adjacent to the project site.
ADT = average daily traffic
CNEL= Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet

LAND USE COMPATIBILITY

The dominant source of noise in the project vicinity is traffic noise from roadways in the vicinity of the project.

EXTERIOR NOISE ASSESSMENT

Based on the monitoring results shown in Table H, the existing measured noise levels at the project site closest to Enderle Center Drive, approximately 120 ft away from the Enderle Center Drive centerline, is 73.7 dBA CNEL. Exterior living areas of residential units, which are either shared spaces, access points to the units, or balconies that are less than 6 ft deep, are not considered as exterior living areas. However, once site plans are available, a Final Acoustical Report would be required to confirm any proposed exterior noise sensitive areas would experience noise levels less than 65 dBA CNEL and to identify any noise reduction features to the exterior living areas, if necessary.

INTERIOR NOISE ASSESSMENT

As discussed above, the California Code of Regulations and the City's Noise Element state that an interior noise level standard of 45 dBA CNEL or less is required for all noise-sensitive rooms. Based on the expected future exterior noise levels closest to Enderle Center Drive and 17th Street approaching 74 dBA CNEL, a minimum noise reduction of 29 dBA would be required.

Based on reference information from transmission loss test reports for various Milgard windows (Milgard 2008), the necessary reduction can be achieved with standard building construction and upgraded windows with Sound Transmission Class (STC) ratings of 30–35, depending on the window-to-glass ratio, at the lots closest to Enderle Center Drive and 17th Street. For all other lots farther from 17th Street and Enderle Center Drive, standard building construction along with standard windows, typically in the STC 25–28 range, interior noise levels of 45 dBA CNEL or less would be achieved.

Once final plans are available to detail the exterior wall construction and a window manufacturer has been chosen, a Final Acoustical Report would be required to confirm the reduction capability of the exterior façades and to identify any specific upgrades necessary to achieve an interior noise level of 45 dBA CNEL or below.

BEST CONSTRUCTION PRACTICES AND DESIGN REQUIREMENTS

In addition to compliance with the City's Municipal Code allowed hours of construction of 7:00 a.m. to 8:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays and City-observed federal holidays, the following best construction practices would further minimize construction noise impacts:

- The project construction contractor shall equip all construction equipment, fixed or mobile, with properly operating and maintained noise mufflers consistent with manufacturer's standards.
- The project construction contractor shall locate staging areas away from off-site sensitive uses during the later phases of project development.
- The project construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site whenever feasible.

REFERENCES

City of Tustin. 2012. *General Plan Noise Element*.

———. 2023. *Municipal Code*. Website: https://library.municode.com/ca/tustin/codes/code_of_ordinances (accessed March 2024). November 27.

County of Orange. 2022. Community Noise Equivalent Level. Website: https://www.ocair.com/about/administration/access-noise/reports-resources/ (accessed March 2024).

EPD Solutions, Inc. 2024. *Traffic Impact Analysis for Enderle Center Project.* February.

Federal Highway Administration (FHWA). 2006. *Roadway Construction Noise Model User's Guide.* January. Washington, D.C. Website: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf (accessed March 2024).

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. Office of Planning and Environment. Report No. 0123. September.

Milgard. 2008. Various Transmission Loss Reports.

APPENDIX A

NOISE MONITORING SHEETS

Noise Measurement Survey – 24 HR

Project Number: ESL2201.76
Project Name: Enderle Project

Test Personnel: Kevin Nguyendo
Equipment: Spark 706RC (SN:206)

Site Number: LT-1 Date: 1/24/24

Time: From 2:00 p.m. To 2:00 p.m.

Site Location: 14122 Paseo Verde, Tustin, CA 92780. Located in the front yard of a home on a tree.

Primary Noise Sources: Traffic on Vandenberg Lane.

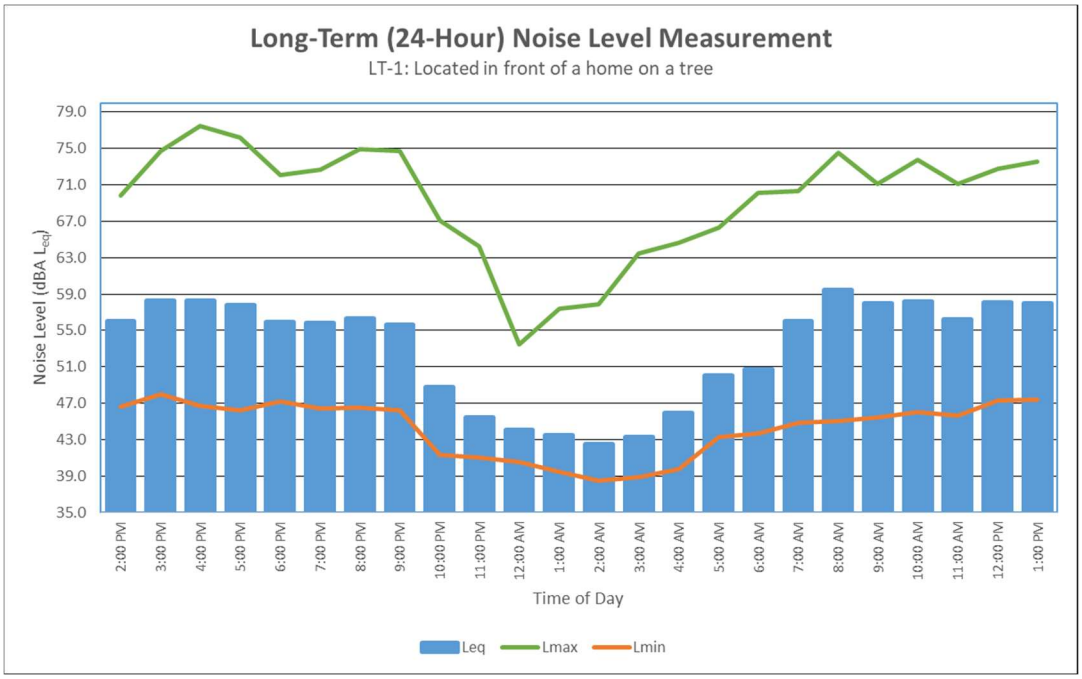
Comments: Approximately 72 inch tall retaining wall around residential community.

Photo:

Long-Term (24-Hour) Noise Level Measurement Results at LT-1

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
2:00 PM	1/24/24	56.0	69.8	46.6
3:00 PM	1/24/24	58.2	74.7	48.0
4:00 PM	1/24/24	58.2	77.5	46.7
5:00 PM	1/24/24	57.7	76.2	46.2
6:00 PM	1/24/24	55.9	72.1	47.2
7:00 PM	1/24/24	55.8	72.7	46.4
8:00 PM	1/24/24	56.3	74.9	46.5
9:00 PM	1/24/24	55.6	74.7	46.2
10:00 PM	1/24/24	48.7	67.1	41.3
11:00 PM	1/24/24	45.4	64.2	41.0
12:00 AM	1/25/24	44.1	53.5	40.5
1:00 AM	1/25/24	43.5	57.4	39.5
2:00 AM	1/25/24	42.5	57.9	38.5
3:00 AM	1/25/24	43.3	63.5	38.9
4:00 AM	1/25/24	45.9	64.6	39.8
5:00 AM	1/25/24	50.0	66.3	43.3
6:00 AM	1/25/24	50.7	70.1	43.7
7:00 AM	1/25/24	56.0	70.3	44.8
8:00 AM	1/25/24	59.4	74.5	45.0
9:00 AM	1/25/24	57.9	71.1	45.4
10:00 AM	1/25/24	58.1	73.7	46.0
11:00 AM	1/25/24	56.2	71.1	45.6
12:00 PM	1/25/24	58.1	72.8	47.3
1:00 PM	1/25/24	58.0	73.5	47.4

Source: Compiled by LSA Associates, Inc. (2024).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



Noise Measurement Survey – 24 HR

Project Number: ESL2201.76
Project Name: Enderle Project

Test Personnel: Kevin Nguyendo
Equipment: Spark 706RC (SN:814)

Site Number: LT-2 Date: 1/24/24

Time: From 2:00 p.m. To 2:00 p.m.

Site Location: 14032 Enderle Center Dr #102, Tustin, CA 92780. Located south of an office building in the parking lot on a light pole.

Primary Noise Sources: Traffic on Enderle Center Drive and Vandenberg Lane.

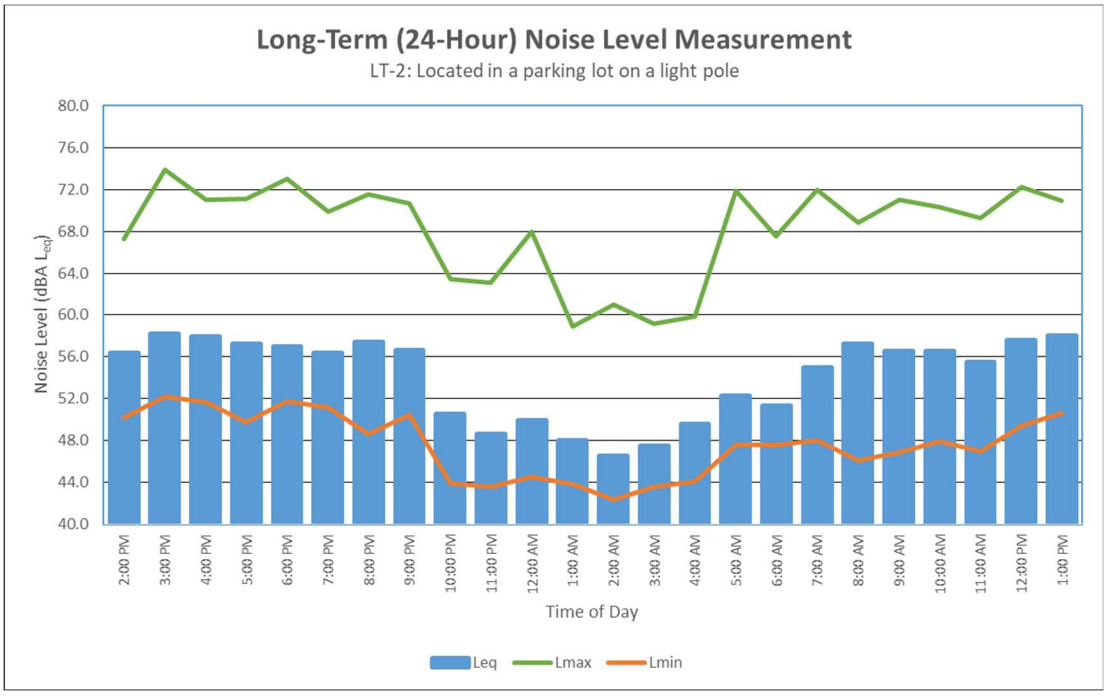
Comments:

Photo:

Long-Term (24-Hour) Noise Level Measurement Results at LT-2

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
2:00 PM	1/24/24	56.4	67.3	50.2
3:00 PM	1/24/24	58.2	73.9	52.2
4:00 PM	1/24/24	57.9	71.0	51.7
5:00 PM	1/24/24	57.3	71.1	49.8
6:00 PM	1/24/24	57.0	73.0	51.8
7:00 PM	1/24/24	56.4	69.9	51.2
8:00 PM	1/24/24	57.4	71.5	48.6
9:00 PM	1/24/24	56.6	70.7	50.5
10:00 PM	1/24/24	50.5	63.4	43.9
11:00 PM	1/24/24	48.6	63.1	43.6
12:00 AM	1/25/24	50.0	68.0	44.5
1:00 AM	1/25/24	48.0	58.9	43.8
2:00 AM	1/25/24	46.5	61.0	42.4
3:00 AM	1/25/24	47.5	59.2	43.6
4:00 AM	1/25/24	49.5	59.9	44.1
5:00 AM	1/25/24	52.3	71.9	47.6
6:00 AM	1/25/24	51.4	67.5	47.6
7:00 AM	1/25/24	54.9	72.0	48.0
8:00 AM	1/25/24	57.2	68.8	46.1
9:00 AM	1/25/24	56.5	71.0	46.9
10:00 AM	1/25/24	56.6	70.3	47.9
11:00 AM	1/25/24	55.5	69.3	47.0
12:00 PM	1/25/24	57.6	72.2	49.4
1:00 PM	1/25/24	58.0	70.9	50.6

Source: Compiled by LSA Associates, Inc. (2024).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



APPENDIX B

CONSTRUCTION NOISE LEVEL CALCULATIONS

Construction Calculations

Phase: Demolition

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Concrete Saw	1	90	20	50	0.5	90	83
Excavator	3	81	40	50	0.5	81	82
Dozer	2	82	40	50	0.5	82	81
					Combined at 50 feet	**91**	**87**
					Combined at Receptor 373 feet	**69**	**70**
					Combined at Receptor 350 feet	**69**	**71**
					Combined at Receptor 505 feet	**66**	**68**

Phase: Site Preparation

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Dozer	3	82	40	50	0.5	82	83
Tractor	4	84	40	50	0.5	84	86
					Combined at 50 feet	**86**	**88**
					Combined at Receptor 373 feet	**69**	**70**
					Combined at Receptor 350 feet	**69**	**71**
					Combined at Receptor 505 feet	**66**	**68**

Phase: Grading

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Excavator	**2**	81	40	50	0.5	81	80
Grader	1	85	40	50	0.5	85	81
Dozer	1	82	40	50	0.5	82	78
Scraper	2	84	40	50	0.5	84	83
Tractor	2	84	40	50	0.5	84	83
					Combined at 50 feet	**90**	**88**
					Combined at Receptor 373 feet	**73**	**71**
					Combined at Receptor 350 feet	**74**	**72**
					Combined at Receptor 505 feet	**70**	**68**

Phase:Building Construstion

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Crane	1	81	16	50	0.5	81	73
Man Lift	3	75	20	50	0.5	75	73
Generator	1	81	50	50	0.5	81	78
Tractor	3	84	40	50	0.5	84	85
Welder / Torch	1	74	40	50	0.5	74	70
					Combined at 50 feet	**86**	**81**
					Combined at Receptor 373 feet	**69**	**63**
					Combined at Receptor 350 feet	**69**	**64**
					Combined at Receptor 505 feet	**66**	**61**

Phase:Paving

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Paver	2	77	50	50	0.5	77	77
All Other Equipment > 5 HP	2	85	50	50	0.5	85	85
Roller	2	80	20	50	0.5	80	76
					Combined at 50 feet	**87**	**86**
					Combined at Receptor 373 feet	**69**	**69**
					Combined at Receptor 350 feet	**70**	**69**
					Combined at Receptor 505 feet	**67**	**66**

Phase:Architectural Coating

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Compressor (air)	1	78	40	50	0.5	78	74
					Combined at 50 feet	**78**	**74**
					Combined at Receptor 373 feet	**61**	**57**
					Combined at Receptor 350 feet	**61**	**57**
					Combined at Receptor 505 feet	**58**	**54**

Sources: RCNM

[1]- Percentage of time that a piece of equipment is operating at full power.
dBA – A-weighted Decibels
Lmax- Maximum Level
Leq- Equivalent Level

APPENDIX C

FHWA TRAFFIC NOISE MODEL PRINTOUTS

TABLE Existing -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 SB Ramps & SR-55 NB Ramps
NOTES: Enderle Center Project - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39346 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.6	158.4	330.1	705.9

TABLE Existing -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 NB Ramps & Carroll Way-Yorba St South
NOTES: Enderle Center Project - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 38861 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.1	157.2	327.5	700.1

TABLE Existing -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between Carroll Way-Yorba St South & Yorba St North-Enderle Center Dr
NOTES: Enderle Center Project - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34006 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
78.2	144.9	300.1	640.8

TABLE Existing -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Yorba St between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5174 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	91.6	185.7

TABLE Existing -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Enderle Center Dr between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3197 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	71.6

TABLE Opening Year - No Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 SB Ramps & SR-55 NB Ramps
NOTES: Enderle Center Project - Opening Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39802 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.1	159.5	332.6	711.3

TABLE Opening Year - No Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 NB Ramps & Carroll Way-Yorba St South
NOTES: Enderle Center Project - Opening Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39155 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.4	157.9	329.1	703.6

TABLE Opening Year - No Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between Carroll Way-Yorba St South & Yorba St North-Enderle Center Dr
NOTES: Enderle Center Project - Opening Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34151 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
78.3	145.3	301.0	642.6

TABLE Opening Year - No Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Yorba St between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Opening Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5607 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.93

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	95.9	195.6

TABLE Opening Year - No Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Enderle Center Dr between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Opening Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3453 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	74.5

TABLE Opening Year - With Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 SB Ramps & SR-55 NB Ramps
NOTES: Enderle Center Project - Opening Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 44963 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.2	171.9	360.3	771.3

TABLE Opening Year - With Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 NB Ramps & Carroll Way-Yorba St South
NOTES: Enderle Center Project - Opening Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 46611 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.8	175.8	368.9	790.0

TABLE Opening Year - With Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between Carroll Way-Yorba St South & Yorba St North-Enderle Center Dr
NOTES: Enderle Center Project - Opening Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39312 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.6	158.3	329.9	705.5

TABLE Opening Year - With Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Yorba St between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Opening Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10768 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	73.0	142.4	299.3

TABLE Opening Year - With Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Enderle Center Dr between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Opening Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6320 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	104.5

TABLE Future Year - No Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 SB Ramps & SR-55 NB Ramps
NOTES: Enderle Center Project - Future Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41852 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.1	164.5	343.7	735.4

TABLE Future Year - No Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 NB Ramps & Carroll Way-Yorba St South
NOTES: Enderle Center Project - Future Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 40478 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.8	161.1	336.3	719.3

TABLE Future Year - No Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between Carroll Way-Yorba St South & Yorba St North-Enderle Center Dr
NOTES: Enderle Center Project - Future Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34801 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
79.0	147.0	304.7	650.7

TABLE Future Year - No Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Yorba St between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Future Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7555 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	61.5	114.4	237.3

TABLE Future Year - No Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Enderle Center Dr between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Future Year - No Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4604 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.19

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	87.0

TABLE Future Year - With Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 SB Ramps & SR-55 NB Ramps
NOTES: Enderle Center Project - Future Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 47013 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
91.2	176.8	371.0	794.5

TABLE Future Year - With Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between SR-55 NB Ramps & Carroll Way-Yorba St South
NOTES: Enderle Center Project - Future Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 47934 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
92.1	178.9	375.8	804.8

TABLE Future Year - With Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: 17th St between Carroll Way-Yorba St South & Yorba St North-Enderle Center Dr
NOTES: Enderle Center Project - Future Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39963 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 45 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.95

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.2	159.9	333.5	713.2

TABLE Future Year - With Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Yorba St between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Future Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12716 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	79.7	158.1	333.9

TABLE Future Year - With Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/04/2024
ROADWAY SEGMENT: Enderle Center Dr between 17th St & Vandenberg Ln
NOTES: Enderle Center Project - Future Year - With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7471 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	61.9	115.5

Appendix D
Vehicle Miles Traveled Analysis

E | P | D SOLUTIONS, INC

WHERE EXPERIENCE AND PASSION MEET

Submitted on:	February 6, 2024
Revised on:	February 21, 2024, March 25, 2024, April 18, 2024, May 13, 2024
Prepared by:	Simon Lin, EIT, Abby Pal Meghan Macias, TE
To:	City of Tustin
Site:	Enderle Center Rezone Project EPD Project Number 23-069
Subject:	Vehicle Miles Traveled (VMT) Analysis

This technical study evaluates the potential vehicle miles traveled (VMT) for the proposed Enderle Center Rezone Project (Project).

The Project is located at the southeast corner of 17th St and Carroll Way-Yorba St South. The Project site is designated Site 17 (Enderle Center) in the City's General Plan Housing Element and consists of approximately 11.62 acres. Of the site area, 7 acres have been identified suitable for housing development. The site is zoned as Planned Community Commercial (PC COM). PCCOM use is limited to nonresidential land uses. Currently the site supports a commercial center. Under the proposed overlay zone, a maximum of 413 housing units and 118,470 square feet (SF) of commercial use could be added to the existing land uses on site. The Project location is shown in Figure 1.

The VMT analysis presented in this document evaluates the VMT impacts of both the residential and commercial portions of the Project within the Enderle Center Housing Overlay Zone. Please note that this VMT analysis is based on the requirements of the *City of Tustin Vehicle Miles Traveled Analysis Guidelines*.

Project Trip Generation

The Project trip generation was calculated using trip rates from the Institute of Transportation Engineers, *Trip Generation 11th Edition*, 2021. Existing conditions (Baseline) were assessed using trip rates for Land Use Code 932 (High-Turnover Sit-Down Restaurant), 821 (Retail), and 710 (Office). Based on the density of the proposed housing, trip rates for Land Use Code 221 (Multifamily Housing (Mid-Rise)) were used. The ITE rates used for the trip generation can be found in *Appendix A*. As shown in *Table 1*, the Project would generate approximately 11,470 daily trips including 757 trips during the AM peak hour and 1,041 trips during the PM peak hour.

Table 1: Project Trip Generation

	Land Use	ITE Code[2]	Unit[3]	ITE Daily Trip Rate/Unit	Project Size	Project ADTs	ITE AM Trip Rate/Unit	Project AM Trips	ITE PM Trip Rate/Unit	Project PM Trips
Existing Conditions (Baseline)	High-Turnover (Sit-Down) Restaurant	932	KSF	107.20	28.75	3,082	9.57	275	9.05	260
	Retail	821	KSF	94.49	39.96	3,776	3.53	141	9.03	361
	Office	710	KSF	10.84	18.426	200	1.52	28	1.44	27
Existing Conditions (Baseline) TOTAL TRIPS						**7,058**		**444**		**648**
Proposed Housing Units + Remaining Buildout Capacity (Project)	Proposed Multi-Family Housing	221	DU	4.54	413	1,875	0.37	153	0.39	161
	[1]Future High-Turnover (Sit-Down) Restaurant	932	KSF	107.20	39.09	4,190	9.57	374	9.05	354
	[1]Future Retail	821	KSF	94.49	54.33	5,133	3.53	192	9.03	491
	[1]Future Office	710	KSF	10.84	25.051	272	1.52	38	1.44	36
Proposed Project TOTAL TRIPS						**11,470**		**757**		**1,041**
Existing Conditions + Proposed Housing Units + Remaining Buildout Capacity (Total)	Proposed Multi-Family Housing	221	DU	4.54	413	1,875	0.37	153	0.39	161
	High-Turnover (Sit-Down) Restaurant	932	KSF	107.20	67.84	7,272	9.57	649	9.05	614
	Retail	821	KSF	94.49	94.29	8,909	3.53	333	9.03	851
	Office	710	KSF	10.84	43.48	471	1.52	66	1.44	63
Existing Conditions + Proposed Housing Units + Remaining Buildout Capacity (Total) TOTAL TRIPS						**18,528**		**1,201**		**1,689**

[1]Future Commercial Buildout was calculated using the 0.4 FAR as stated in the General Plan, and then deducting existing landuse area from the maximum buildout

[2]Trip rates from the Institute of Transportation Engineers (ITE), Trip Generation Manual,11th Edition, 2021.

[3]KSF=Thousand Square Feet, DU= Dwelling Units

Background

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to replace Level of Service (LOS) as the appropriate method for evaluating transportation impacts under CEQA. SB 743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. The bill also specified that delay-based LOS could no longer be considered an indicator of a significant impact on the environment under CEQA. In response, the Natural Resources Agency amended the CEQA Guidelines to include new Section 15064.3 - Determining the Significance of Transportation Impacts. The section states that Vehicle Miles Traveled (VMT) is the most appropriate measure of a project's transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

City of Tustin VMT Screening Criteria

The project is located in the City of Tustin (City). The City's Guidelines provide the following screening thresholds to assess whether further VMT analysis is required. If a project meets one of the following criteria, then the VMT impact of the project would be considered less-than-significant and no further analysis of VMT would be required:

1. The project consists of 100% affordable housing.
2. The project is located within one half (½) mile of qualifying transit.
3. The project type has been identified as local serving land use.
4. The project is in a low VMT area.
5. The project generates less than 500 daily vehicle trips.

The applicability of each criterion to both portions of the Project is discussed below:

Screening Criteria 1 – Affordable Housing Screening: As per the City's guidelines, projects which consist of 100% affordable housing will have a less than significant impact on VMT.

The Project does not consist of 100% affordable housing and therefore would not satisfy the requirements of Screening criteria 1 - Affordable Housing Screening.

Screening Criteria 2 – High Quality Transit Screening: As per the City's guidelines, projects located within one half (½) mile of qualifying transit may be presumed to have a less than significant impact. Qualifying transit is defined as follows:

- **Major transit stop** means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Pub. Resources Code, § 21064.3)
- **High-quality transit corridor** means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. (Pub. Resources Code, § 21155).

The High-Quality Transit Area from the City's Guideline is shown in Figure 2. As shown in Figure 2, the Project is located approximately 4 miles away from qualifying transit, therefore, the project would not satisfy the requirements of Screening Criteria 2 – High Quality Transit screening.

Screening Criteria 3 - Project Type Screening: As per the City's guidelines, projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses would have a less than significant impact on VMT. The types of projects considered local serving include K-12 schools, local parks, day care centers, gas stations, libraries, fire stations, and other local serving civic uses.

This screening criteria would be discussed separately for the residential and commercial portion of the Project in the sections below.

Screening Criteria 4 - Low VMT Area Screening: The City's guidelines include a screening threshold for projects located in a low VMT generating area. Low VMT generating area is defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.

This screening criteria would be discussed separately for the residential and commercial portion of the Project in the sections below.

Screening Criteria 5 - Generating less than 500 daily vehicle trips: As per the City's guidelines, projects which generate less than 500 daily vehicle trips would have a less than significant impact on VMT.

As shown in Table 1, the Project is forecasted to generate 11,470 daily trips, which is more than 500 daily vehicle trips. Therefore, the Project would not meet Screening Criteria 5.

The City of Tustin VMT screening form for the Project can be found in *Appendix B*.

Residential VMT Screening

Screening Criteria 3 - Project Type Screening:

Screening Criteria 3 would not apply to the residential portion of the Project.

Screening Criteria 4 - Low VMT Area Screening:

The Map of Low VMT Generating Area for VMT per capita from the City's Guideline is shown in Figure 3. As shown in Figure 3, the Project is located in a low VMT area. Therefore, the residential portion of the Project would satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening.

The residential portion of the Project would meet Screening Criteria 4 – Low-VMT Area Screening, and therefore the residential portion of the Project's impact on VMT would be considered less-than-significant. However, a complete VMT analysis was conducted at the request of the City (included below).

Commercial VMT Screening

Screening Criteria 3 - Project Type Screening:

The project proposes retail use with an area of 118,470 SF, which is more than 50,000 square feet. Therefore, it would not satisfy the requirements of Screening Criteria 3 - Project Type Screening.

Screening Criteria 4 - Low VMT Area Screening:

The Map of Low VMT Generating Area for VMT per employee from the City's Guideline is shown in Figure 4. As shown in Figure 4, the Project is not located in a low VMT area. Therefore, the commercial portion of the Project would not satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening.

Because the commercial portion of the Project would not meet any of the City's screening criteria, the commercial portion of the Project's impact on VMT would not be considered less-than-significant and an analysis of VMT would be required.

VMT Analysis Methodology

The City's guidelines require use of the Orange County Transportation Analysis Model 5.0 v.6.22.23 (OCTAM) for preparation of VMT analysis. The Project is located within one Model Traffic Analysis Zone (TAZ), TAZ 1103. The total population and employed population of the Project was calculated using the current household average in nearby TAZs. The Project total households and population was entered into TAZ 1103. Employment growth in TAZ 1103 was already accounted for by the model.

The Model includes validated scenarios for 2016 and 2045. These scenarios have been validated using existing traffic counts. Data for years between 2016 and 2045 can be extrapolated using linear interpolation between the 2016 and 2045 Model output. The Model was run for the base year (2016) and future year (2045) without and with-project conditions (i.e. four full Model runs). As noted below under the discussion of significance thresholds, the City's significance threshold for residential projects is based on the project's home-based VMT (HB VMT) per capita; City's significance threshold for non-residential projects is based on the project's employment VMT (HBW VMT) per employee.

Residential VMT Significance Threshold

The significance criteria from the City's guidelines are as follows:

The City of Tustin VMT Guidelines have relied upon the recommendations provided by OPR and modeling data provided by OCTA to establish the following VMT thresholds of significance for residential land use projects:

Residential Projects: A significant transportation impact occurs if:

1. The project's base year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

2. The project's future year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

The metric utilized as the residential VMT threshold of significance for City of Tustin is the average city-wide VMT under 2016 Base Model Year, which has been calculated to be 15.0 HB VMT per capita. The OPR Technical Advisory recommends that a fifteen percent reduction in VMT below that of existing development may be a reasonable threshold. However, given that the City of Tustin is primarily located within a suburban setting, the amount of VMT reduction from an individual land use project is limited, and it is likely infeasible to achieve a 15% reduction below the citywide average for many areas in the City. However, by ensuring

that land use development projects result in no net increase in VMT over the current base year citywide VMT averages, a sustained reduction in citywide VMT and GHG emissions will occur, the Project's impact on VMT would be considered less-than-significant.

Project Residential VMT Evaluation

The total HB VMT of TAZ 1103 was evaluated using the OCTAM VMT post-processor. To determine the Project's HB VMT per capita, the total HB VMT of TAZ 1103 is divided by the total residents of TAZ 1103. Tustin Citywide HB VMT per capita was obtained from the OCTAM base year model following a similar process. The VMT analysis results per the City's significance criteria are shown in Table 2.

As shown in the tables, the Project's HB VMT per capita would be lower than the OCTAM base model year citywide average HB VMT per capita for the City of Tustin under both base and future year conditions. The Project's HB VMT per capita would be 19.7% below the City's threshold under base conditions and 18.7% below the City's threshold under future conditions; therefore, the residential portion of the Project would result in a less than significant VMT impact.

Commercial VMT Significance Threshold

The significance criteria from the City's guidelines are as follows:

The City of Tustin VMT Guidelines have relied upon the recommendations provided by OPR and modeling data provided by OCTA to establish the following VMT thresholds of significance for residential land use projects:

Non-residential Projects: A significant transportation impact occurs if:

1. The project's base year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee for the City of Tustin.

2. The project's future year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee for the City of Tustin.

The metric utilized as the employment VMT per employee VMT threshold of significance for City of Tustin is the average city-wide VMT under 2016 Base Model Year, which has been calculated to be 25.1 HBW VMT per employee. The OPR Technical Advisory recommends that a fifteen percent reduction in VMT below that of existing development may be a reasonable threshold. However, given that the City of Tustin is primarily located within a suburban setting, the amount of VMT reduction from an individual land use project is limited, and it is likely infeasible to achieve a 15% reduction below the citywide average for many areas in the City. However, by ensuring that land use development projects result in no net increase in VMT over the current base year citywide VMT averages, a sustained reduction in citywide VMT and GHG emissions will occur, the Project's impact on VMT would be considered less-than-significant.

Project Commercial VMT Evaluation

The total HBW VMT of TAZ 1103 was evaluated using the OCTAM VMT post-processor. To determine the Project's HBW VMT per employee, the total HBW VMT of TAZ 1103 is divided by the total employees of TAZ 1103. Tustin Citywide HBW VMT per employee was obtained from the OCTAM base year model following a similar process. The VMT analysis results per the City's significance criteria are shown in Table 3.

As shown in Table 3, the Project's HBW VMT per employee would be lower than the OCTAM base model year citywide average HBW VMT per employee for the City of Tustin under both base and future year conditions. The Project's HBW VMT per employee would be 5.5% below the City's threshold under base

conditions and 3.7% below the City's threshold under future conditions; therefore, the commercial portion of the Project would result in a less than significant VMT impact.

Overall, the entire Project can be assumed to have a less than significant VMT impact.

If you have any questions, please feel free to contact me at techservices@epdsolutions.com or at (949) 794-1180.

Table 2: VMT Analysis of Residential of Project Impact per City Guidelines

	Base Year 2016	Future Year 2045
Project TAZ 1103 Zone Total Home-based VMT	47,899	48,954
TAZ 1103 Total Residents	3,991	4,029
Project 1103 HB VMT per capita	**12.0**	**12.2**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline HB VMT per capita	**15.0**	**15.0**
% Above/Below Threshold	-19.7%	-18.7%
Impact?	**No**	**No**

Table 3: VMT Analysis of Commercial Part of Project Impact per City Guidelines

	Base Year 2016	Future Year 2045
Project TAZ 1103 Zone Total Home-based Work VMT	261,211	273,166
TAZ 1103 Total Employees	11,012	11,303
Project 1103 HBW VMT per employee	**23.7**	**24.2**
City of Tustin Baseline Home-based Work VMT	1,475,341	1,475,341
City of Tustin Baseline Total Employees	58,774	58,774
City of Tustin Baseline HBW VMT per employee	**25.1**	**25.1**
% Above/Below Threshold	-5.5%	-3.7%
Impact?	**No**	**No**

Figure 1: Project Site Location

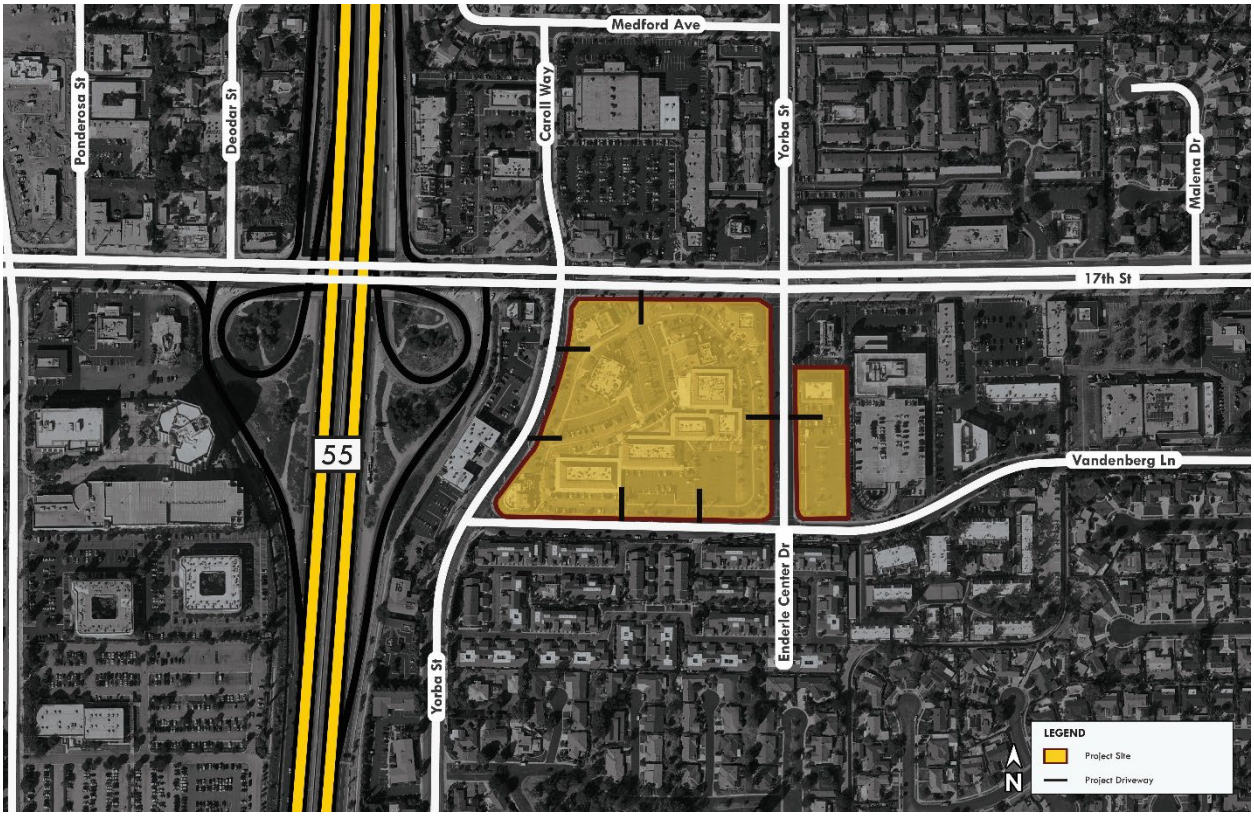


Figure 2: High-Quality Transit Area

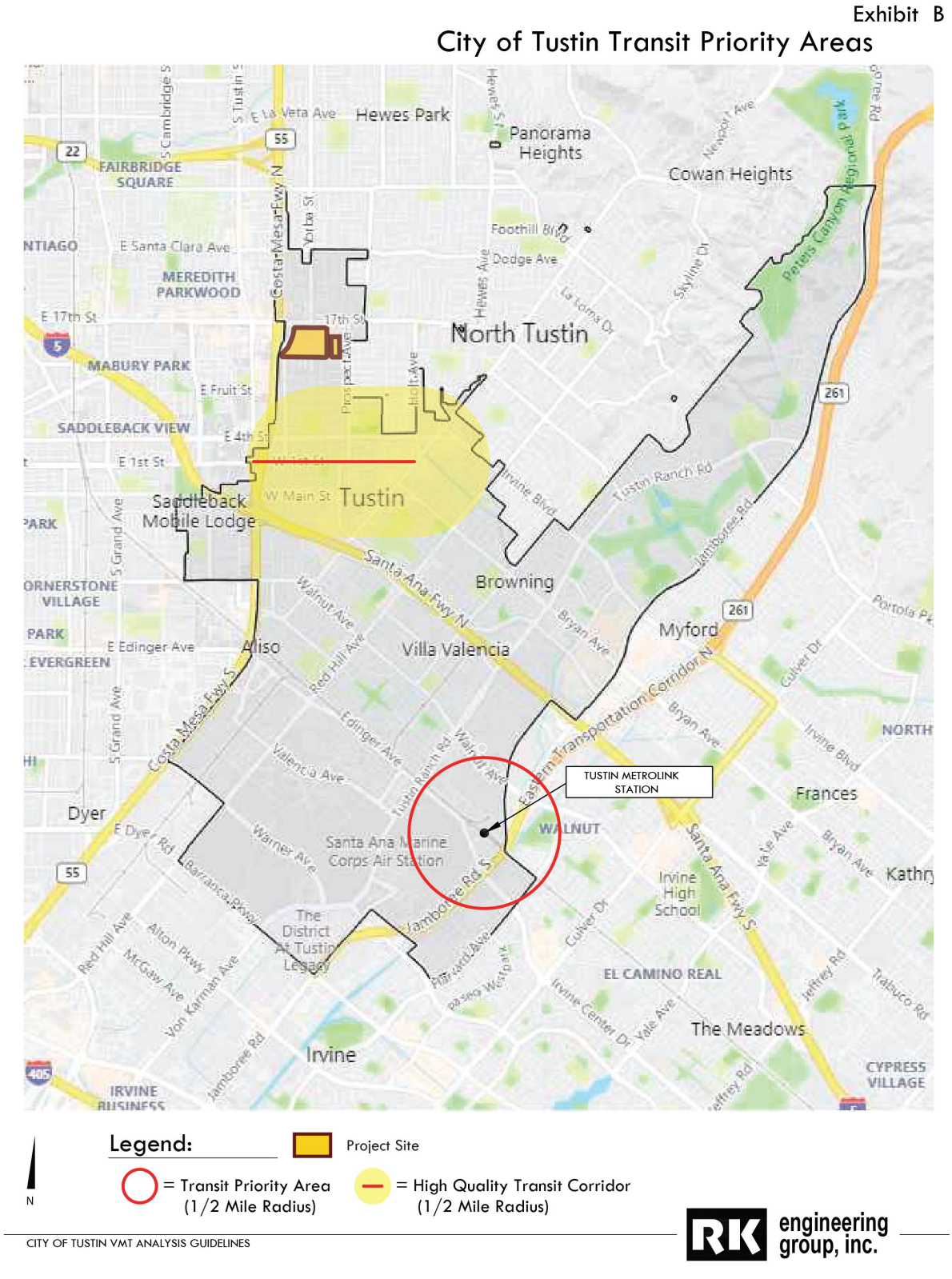


Figure 3: Low VMT Generating Area - VMT per capita

Exhibit D

Low VMT Areas - VMT Per Capita

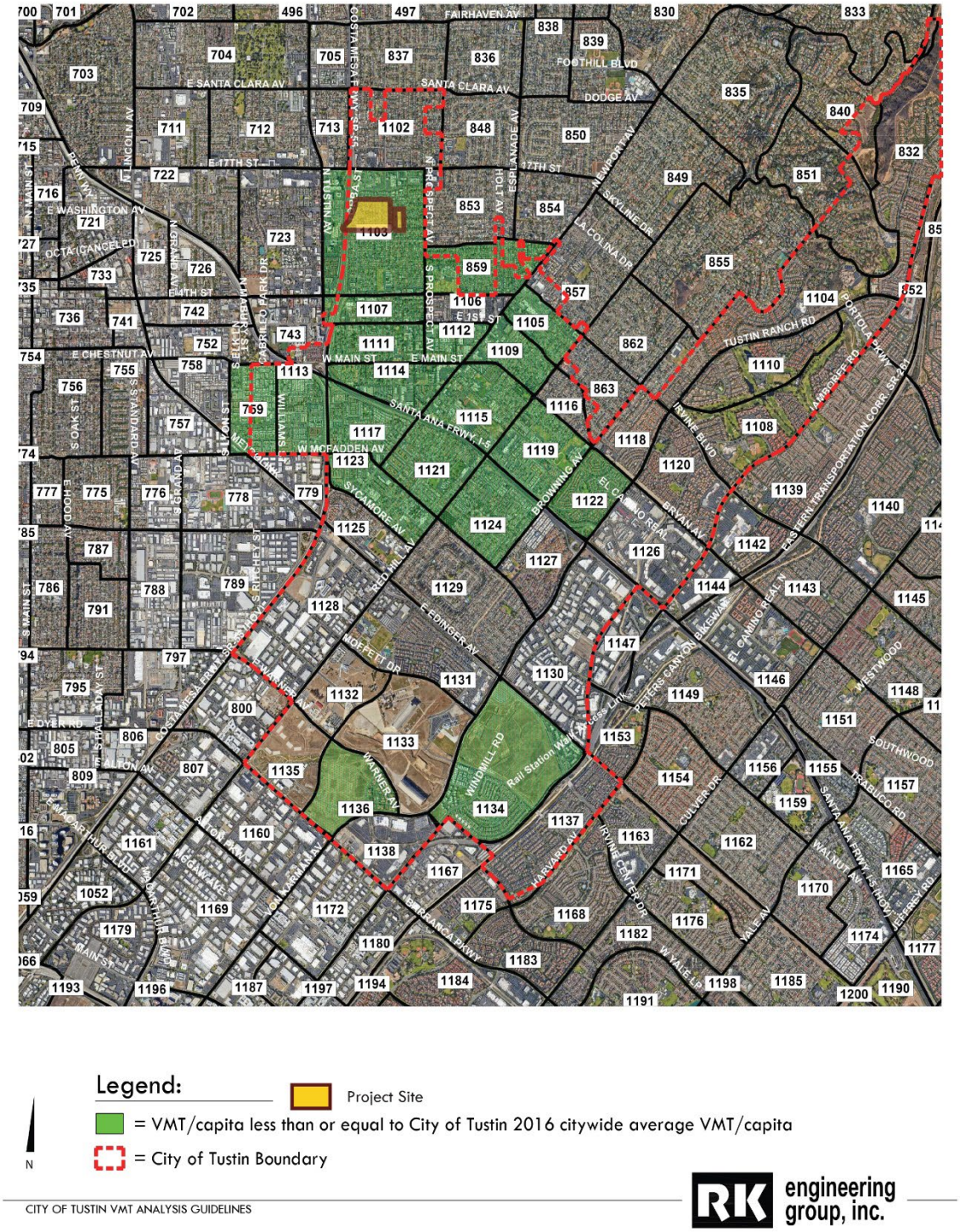
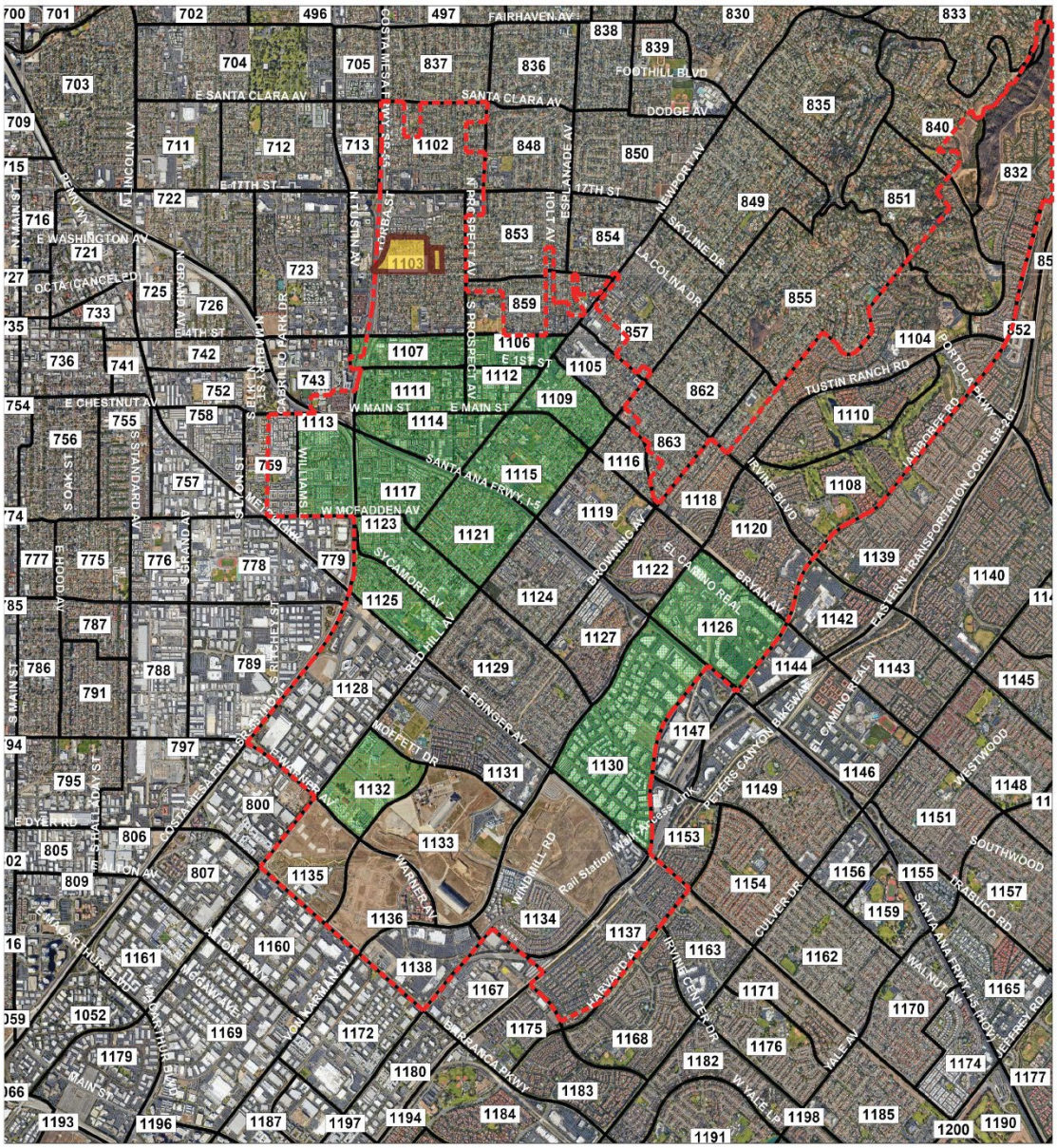


Figure 4: Low VMT Generating Area - VMT per employee

Exhibit E

Low VMT Areas - VMT Per Employee



CITY OF TUSTIN VMT ANALYSIS GUIDELINES

RK engineering group, inc.

APPENDIX A – ITE Trip Generation Rates

Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

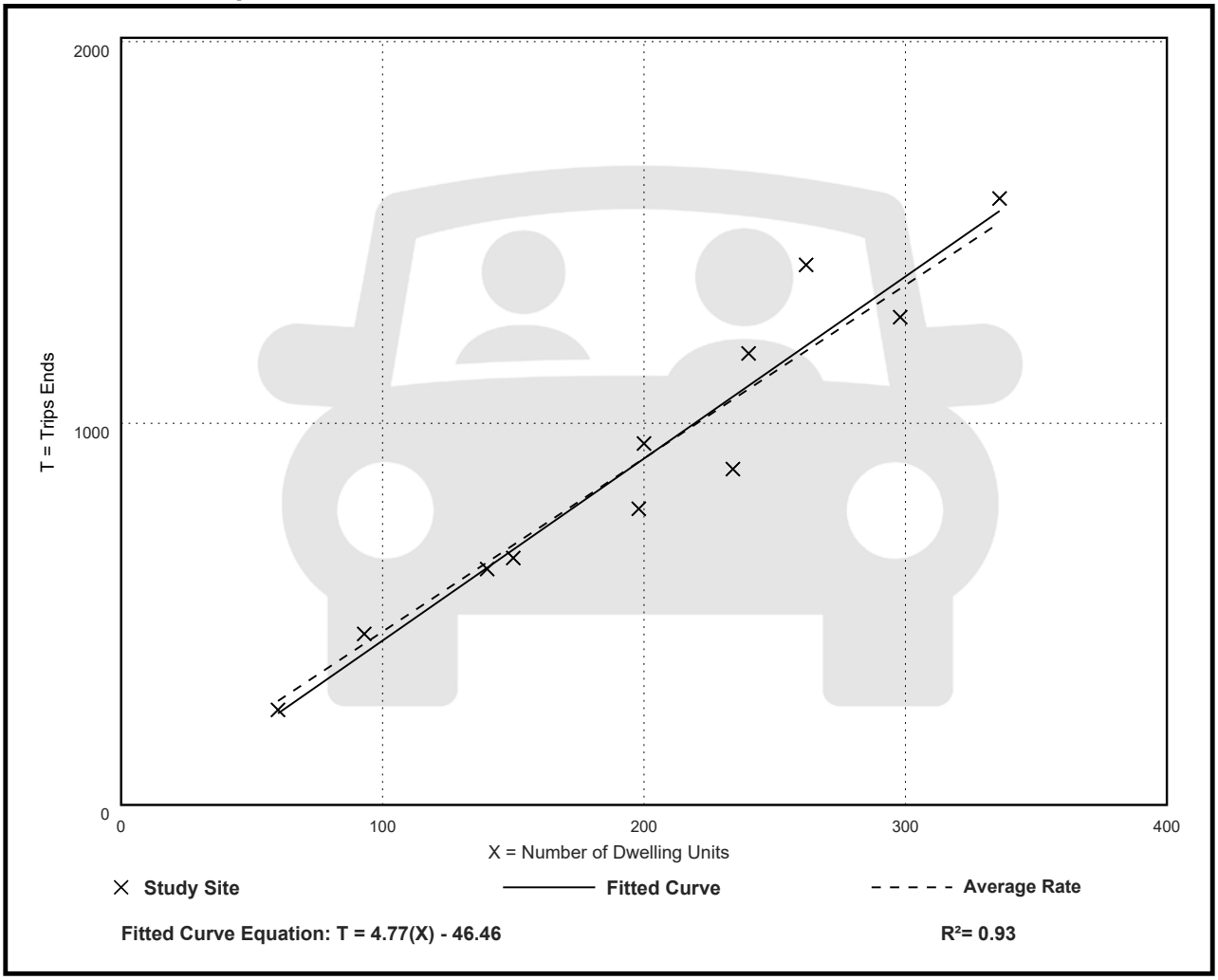
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. Num. of Dwelling Units: 201
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



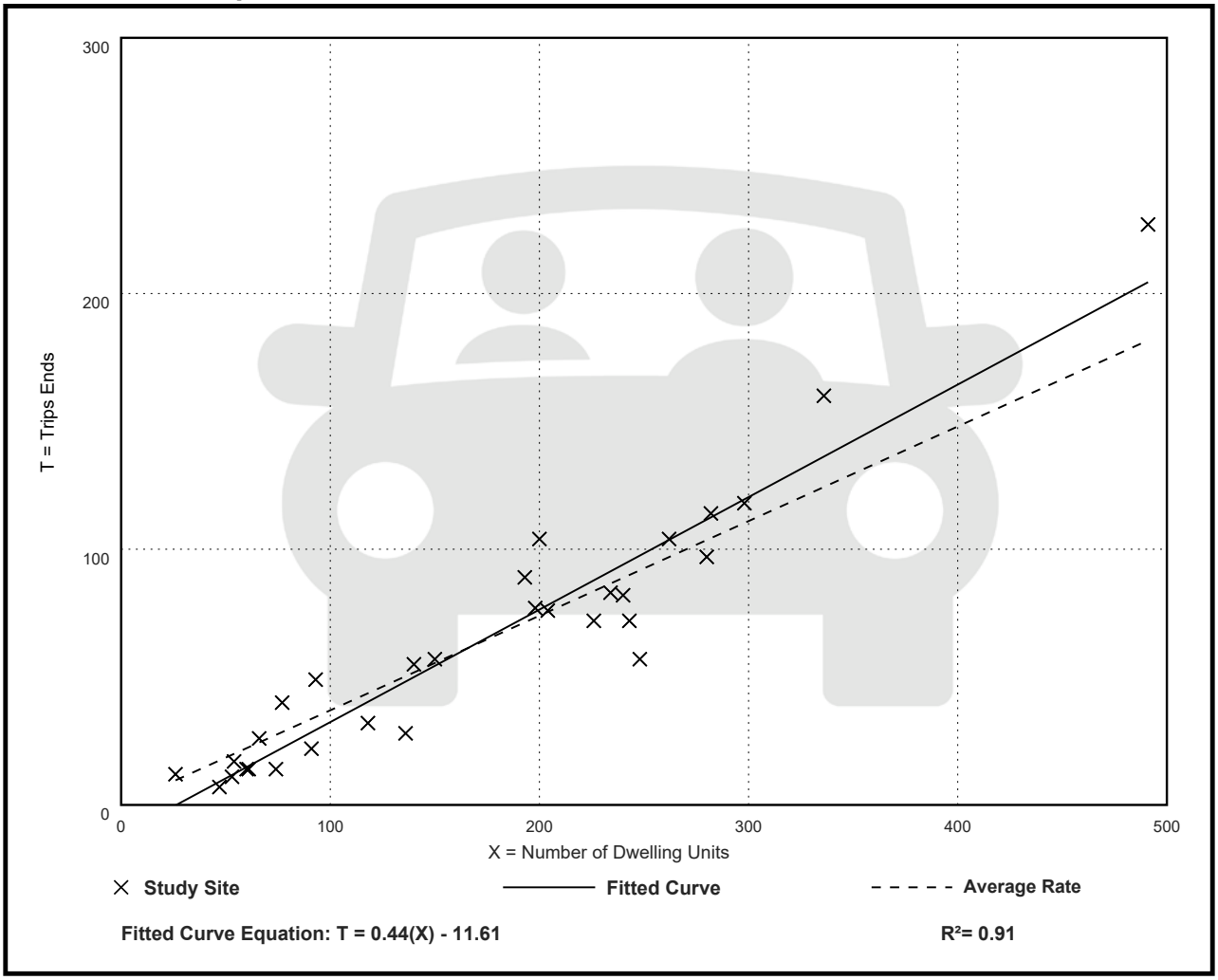
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 30
Avg. Num. of Dwelling Units: 173
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Fitted Curve Equation: T = 0.44(X) - 11.61

R^2= 0.91

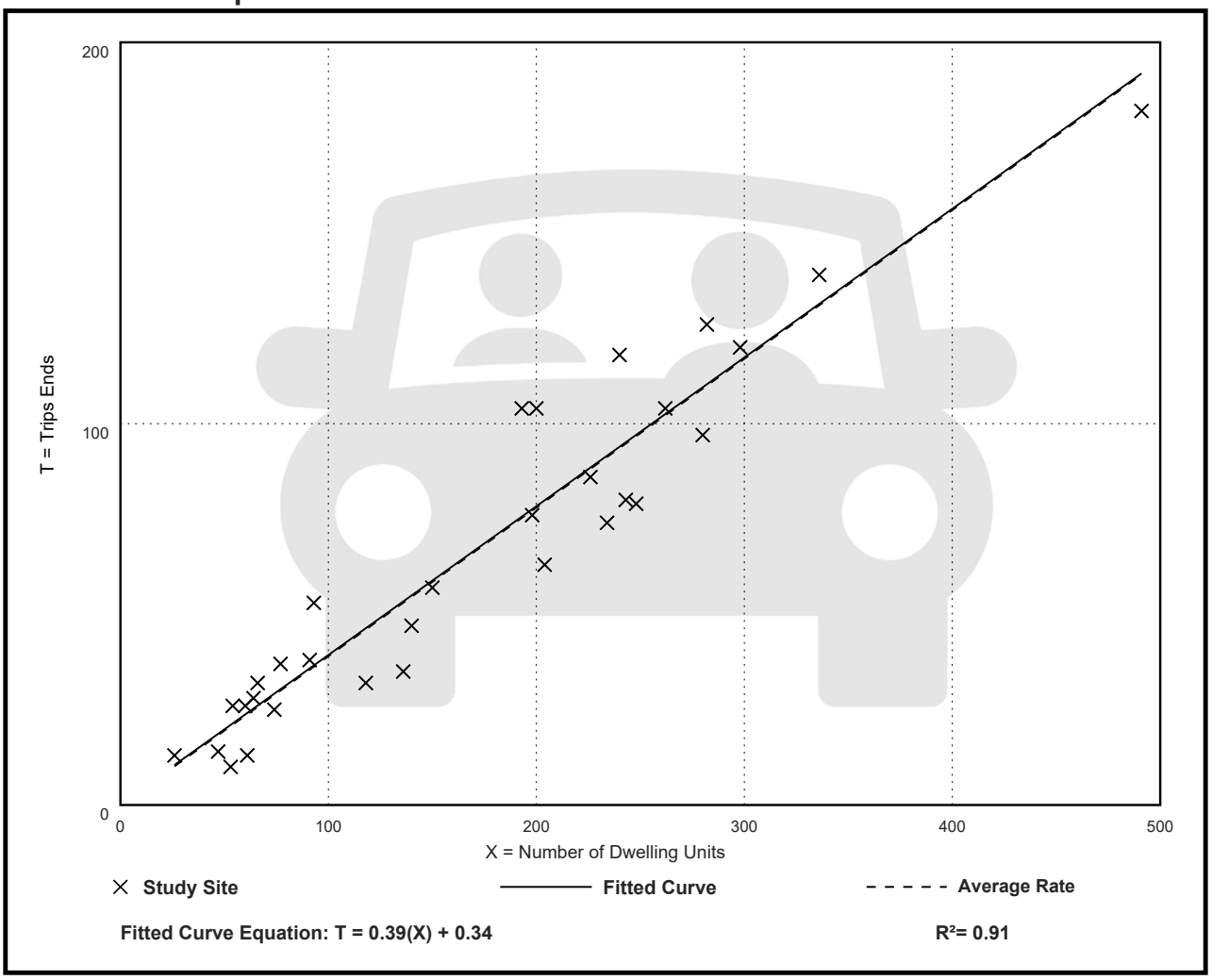
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Land Use: 710
General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 3.0 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN)Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061

General Office Building
(710)

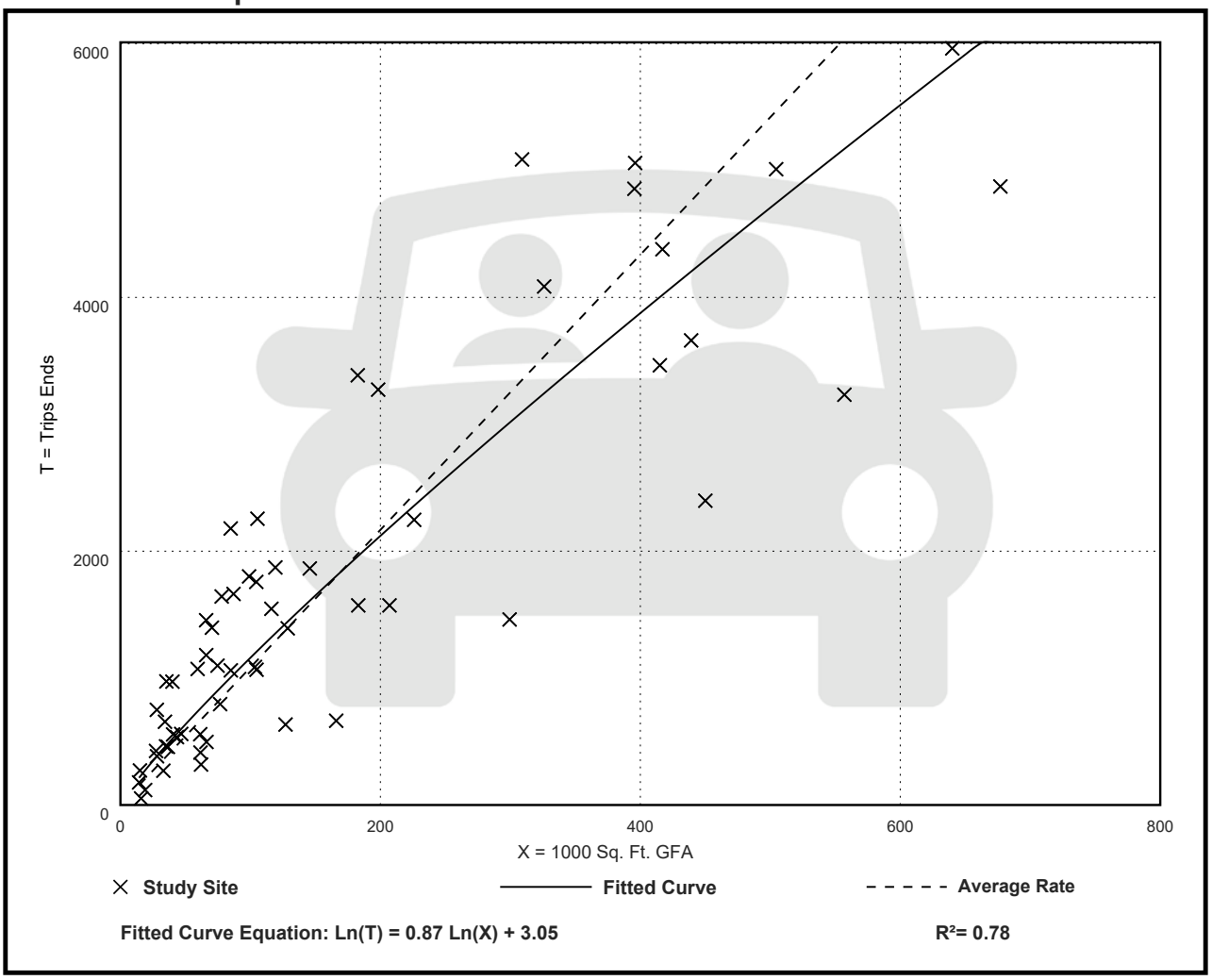
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 3.05

R^2= 0.78

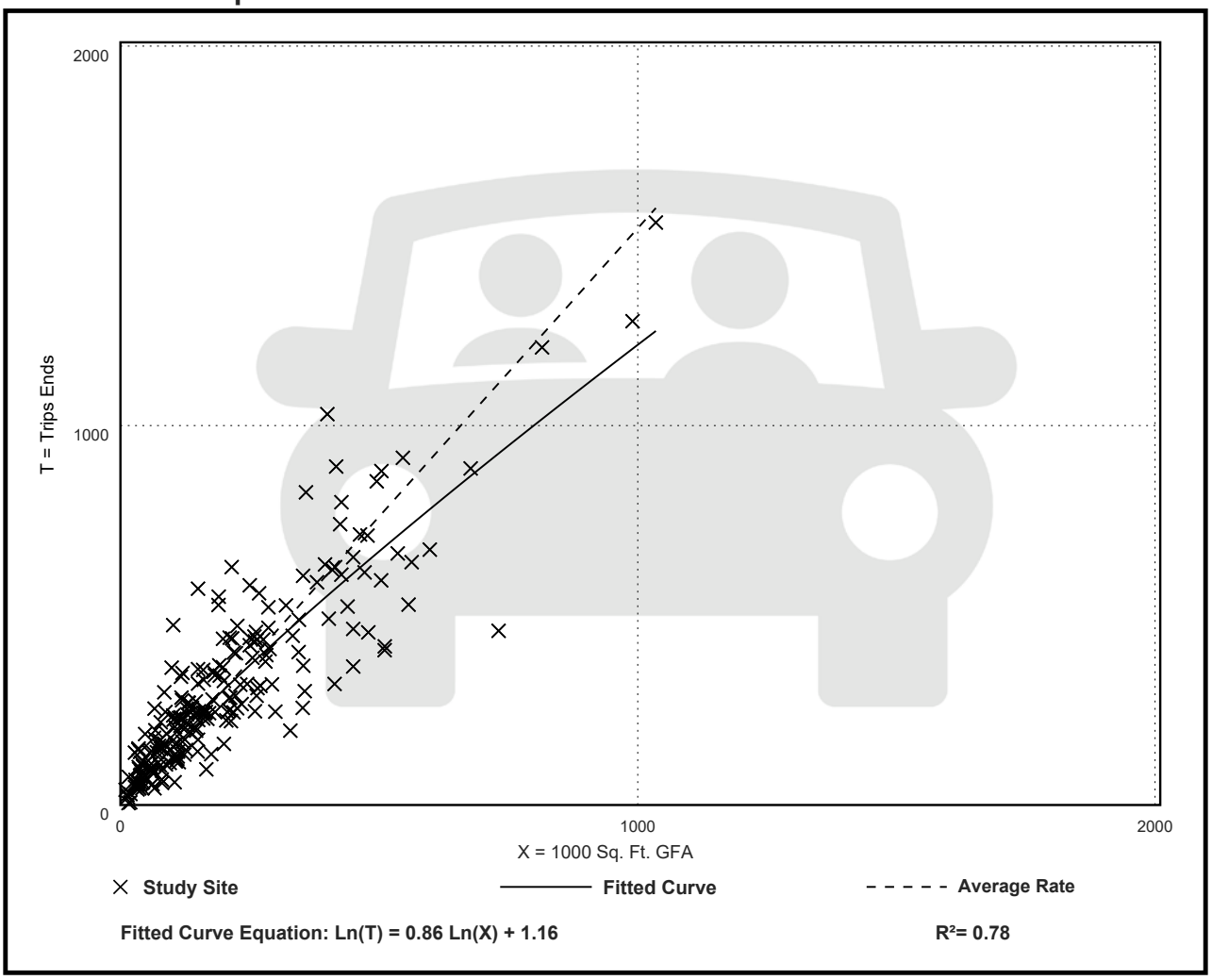
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.86 Ln(X) + 1.16

R^2= 0.78

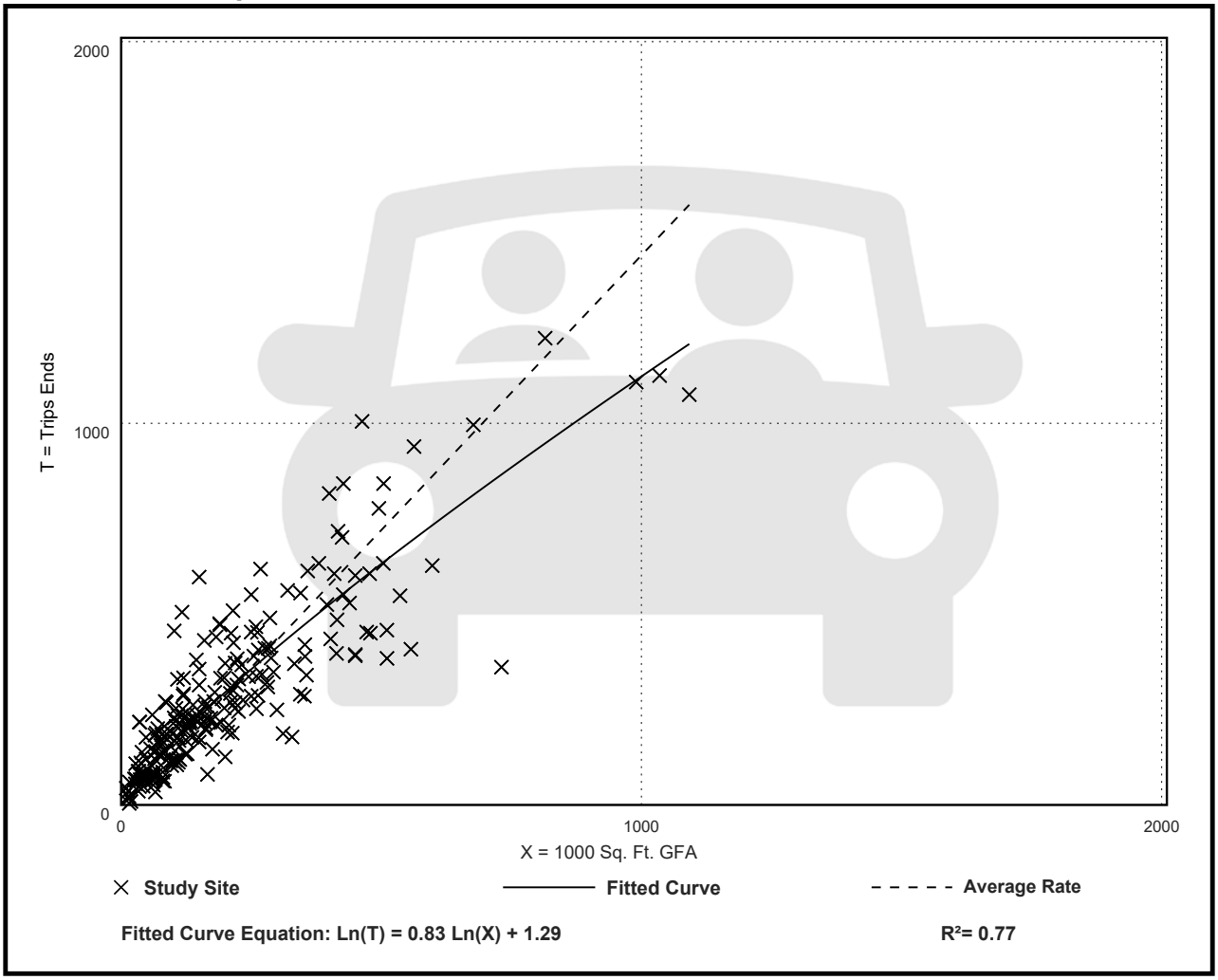
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.83 Ln(X) + 1.29

R^2= 0.77

Land Use: 821
Shopping Plaza (40-150k)

Description

A shopping plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has between 40,000 and 150,000 square feet of gross leasable area (GLA). The term "plaza" in the land use name rather than "center" is simply a means of distinction between the different shopping center size ranges. Various other names are commonly used to categorize a shopping plaza within this size range, depending on its specific size and tenants, such as neighborhood center, community center, and fashion center.

Its major tenant is often a supermarket but many sites are anchored by home improvement, discount, or other stores. A shopping plaza typically contains more than retail merchandising facilities. Office space, a movie theater, restaurants, a post office, banks, a health club, and recreational facilities are common tenants. A shopping plaza is almost always open-air and the GLA is the same as the gross floor area of the building.

The 150,000 square feet GLA threshold value between shopping plaza and shopping center (Land Use 820) is based on an examination of trip generation data. For a shopping plaza that is smaller than the threshold value, the presence or absence of a supermarket within the plaza has a measurable effect on site trip generation. For a shopping center that is larger than the threshold value, the trips generated by its other major tenants mask any effects of the presence or absence of an on-site supermarket.

The 40,000 square feet GFA threshold between shopping plaza and strip retail plaza (Land Use 822) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land Use 820), strip retail plaza (<40k) (Land Use 822), and factory outlet center (Land Use 823) are related uses.

Land Use Subcategory

The presence or absence of a supermarket in a shopping plaza has been determined to have a measurable effect on site trip generation. Therefore, data are presented for two subcategories for this land use: sites with a supermarket anchor and sites without a supermarket.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, New York, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

Source Numbers

105, 110, 156, 159, 186, 198, 204, 211, 213, 239, 259, 260, 295, 301, 304, 305, 307, 317, 319, 358, 376, 390, 400, 404, 437, 444, 446, 507, 580, 598, 658, 728, 908, 926, 944, 946, 960, 973, 974, 1004, 1009, 1025, 1069

Shopping Plaza (40-150k) - Supermarket - Yes (821)

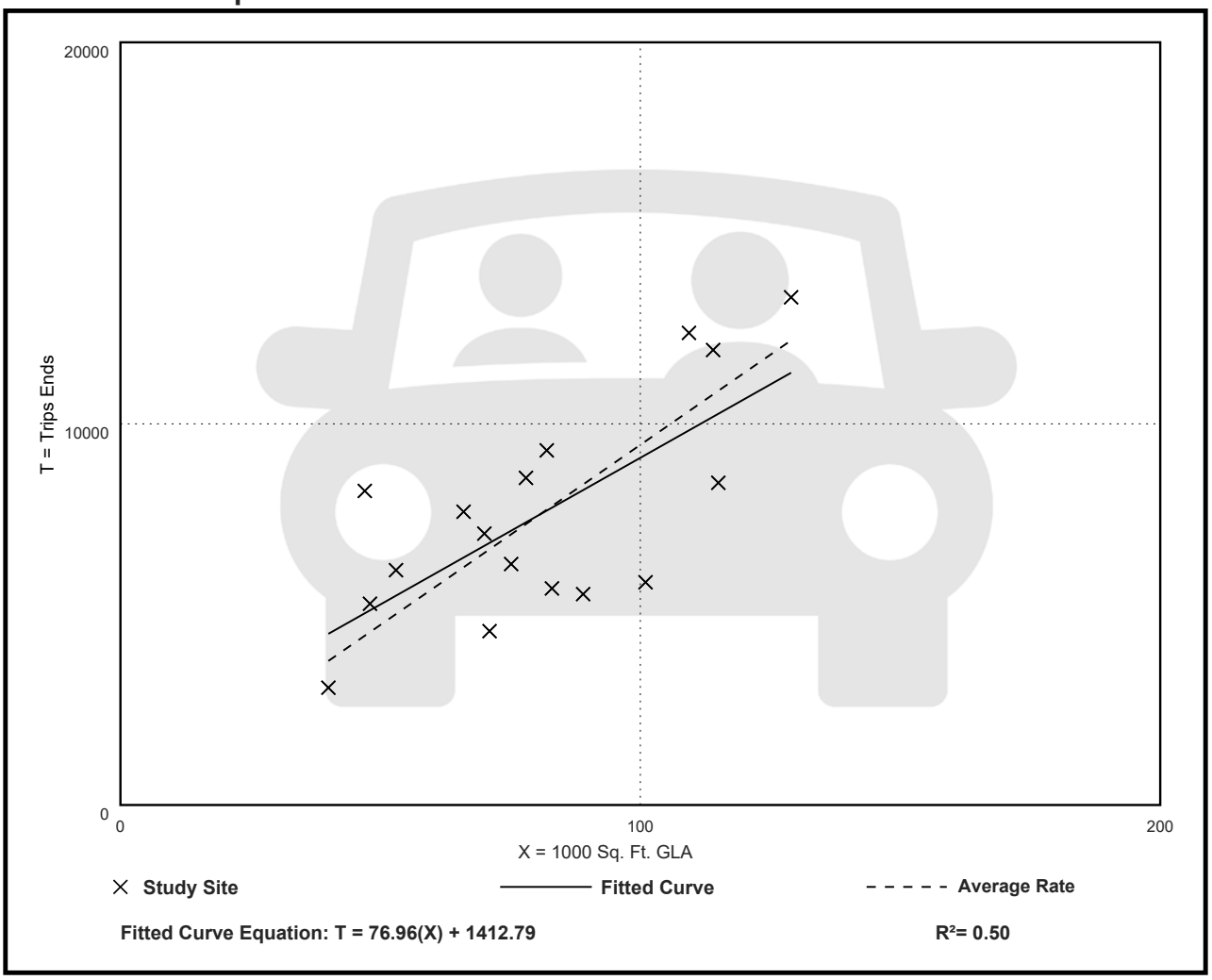
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 17
Avg. 1000 Sq. Ft. GLA: 81
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
94.49	57.86 - 175.32	26.55

Data Plot and Equation



Fitted Curve Equation: T = 76.96(X) + 1412.79

R^2= 0.50

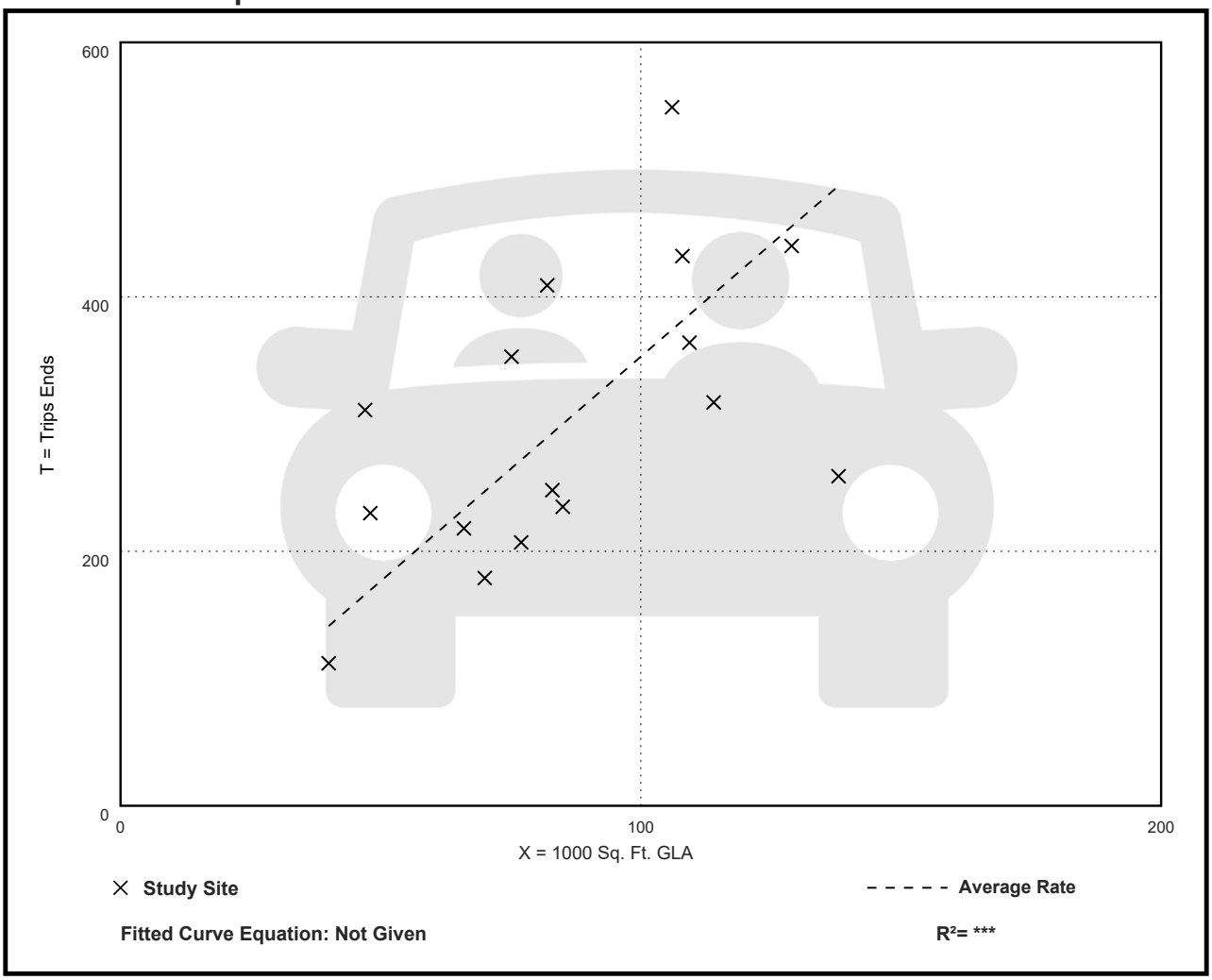
Shopping Plaza (40-150k) - Supermarket - Yes (821)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 16
Avg. 1000 Sq. Ft. GLA: 86
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.53	1.88 - 6.62	1.17

Data Plot and Equation



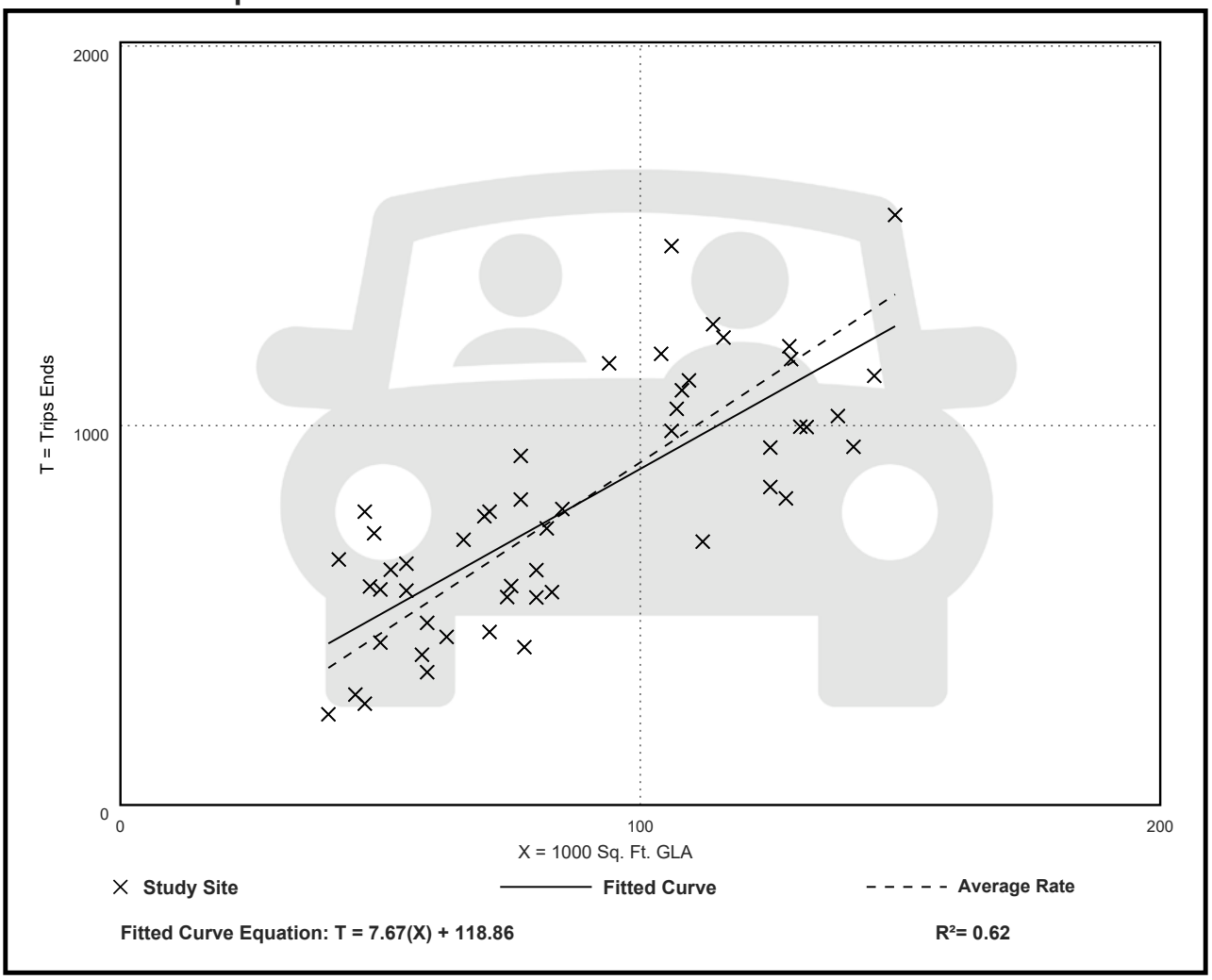
Shopping Plaza (40-150k) - Supermarket - Yes (821)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 51
Avg. 1000 Sq. Ft. GLA: 87
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
9.03	5.35 - 16.45	2.37

Data Plot and Equation



Fitted Curve Equation: T = 7.67(X) + 118.86

R^2= 0.62

Land Use: 932
High-Turnover (Sit-Down) Restaurant

Description

This land use consists of sit-down, full-service eating establishments with a typical duration of stay of 60 minutes or less. This type of restaurant is usually moderately priced, frequently belongs to a restaurant chain, and is commonly referred to as casual dining. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not accept reservations. A patron commonly waits to be seated, is served by wait staff, orders from a menu, and pays after the meal.

Some facilities offer carry-out for a small proportion of its customers. Some facilities within this land use may also contain a bar area for serving food and alcoholic drinks.

Fast casual restaurant (Land Use 930), fine dining restaurant (Land Use 931), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window (Land Use 934) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Florida, Georgia, Indiana, Kentucky, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Vermont, and Wisconsin.

Source Numbers

126, 269, 275, 280, 300, 301, 305, 338, 340, 341, 358, 384, 424, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728, 868, 884, 885, 903, 927, 939, 944, 961, 962, 977, 1048

High-Turnover (Sit-Down) Restaurant (932)

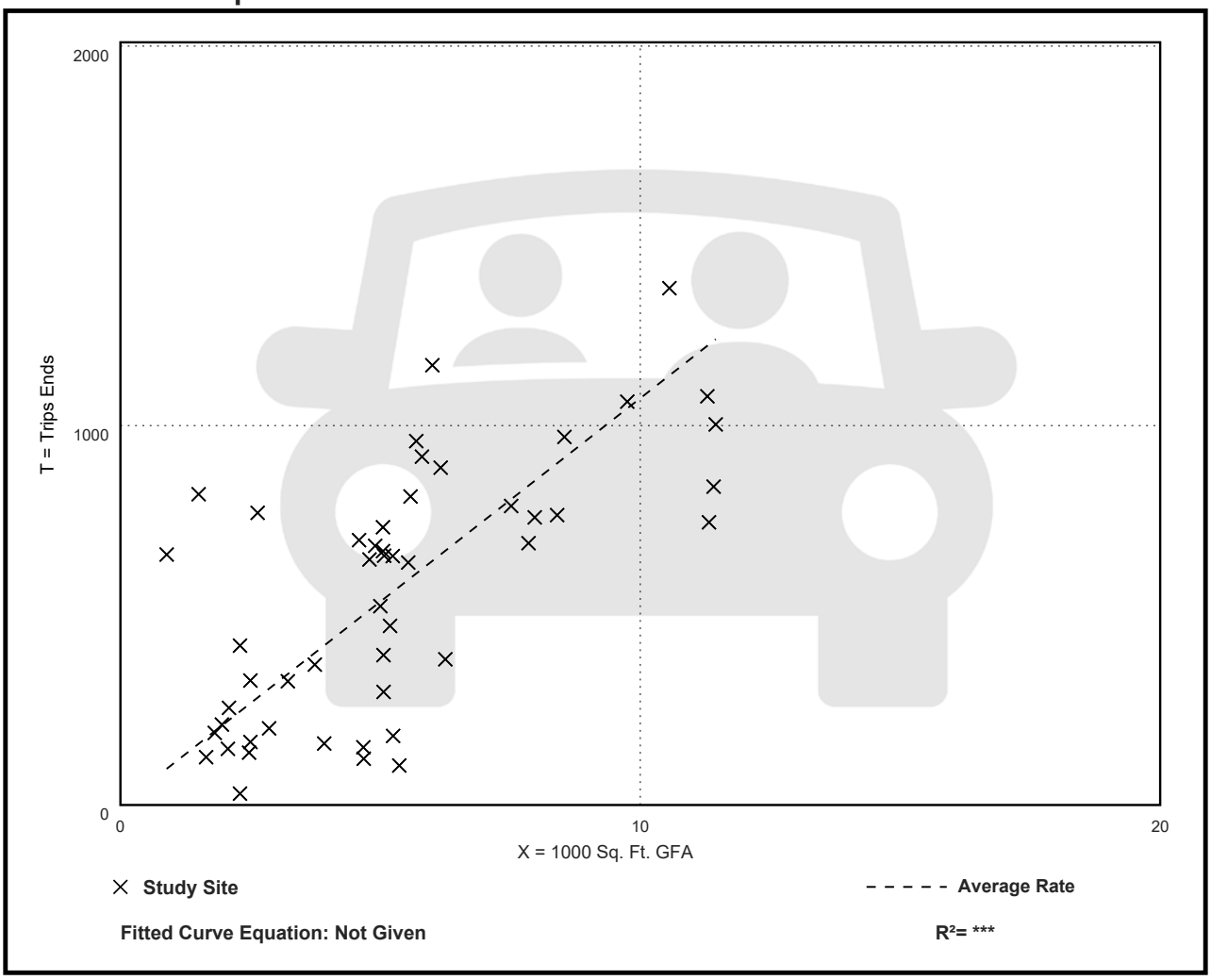
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 50
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
107.20	13.04 - 742.41	66.72

Data Plot and Equation



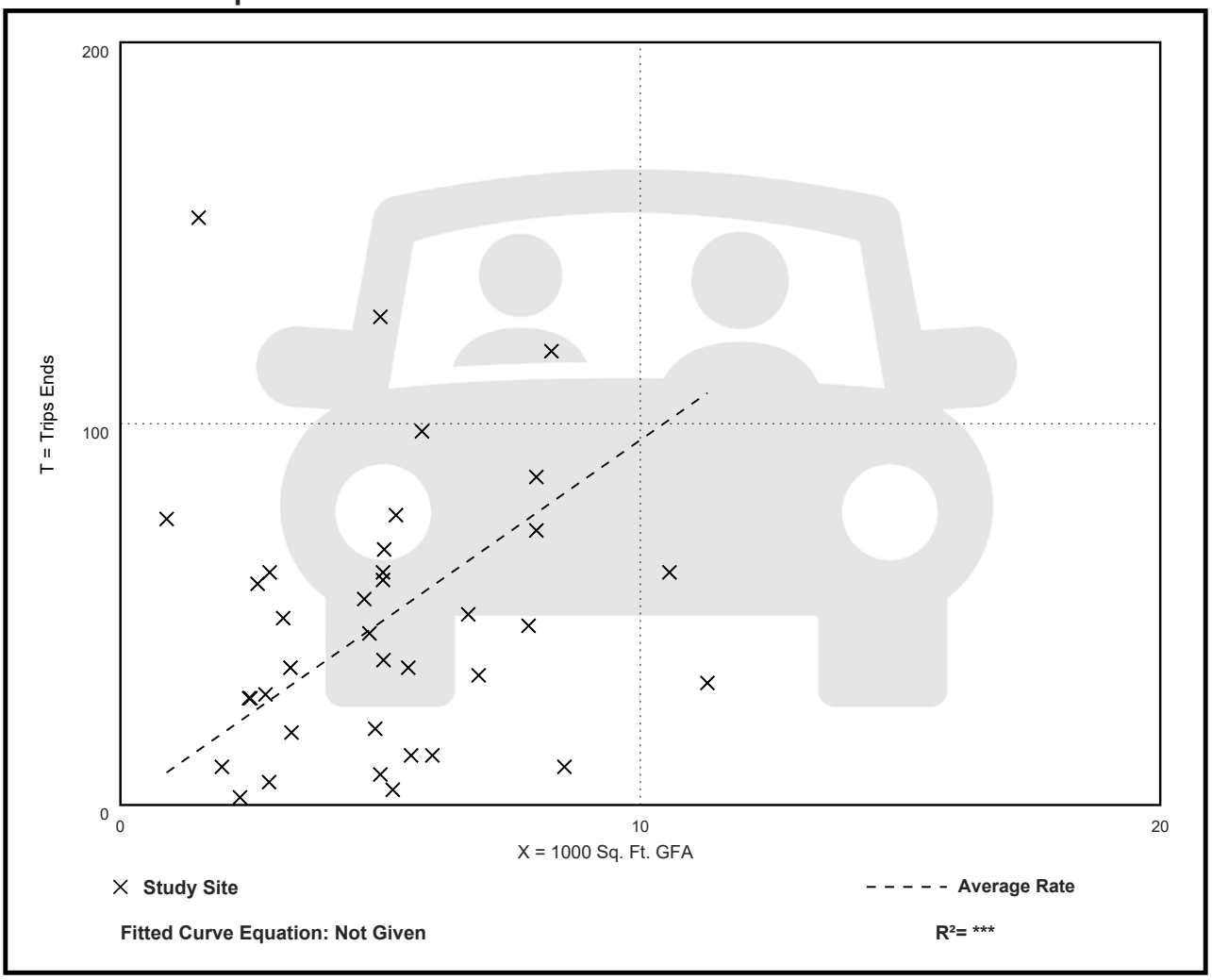
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 37
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



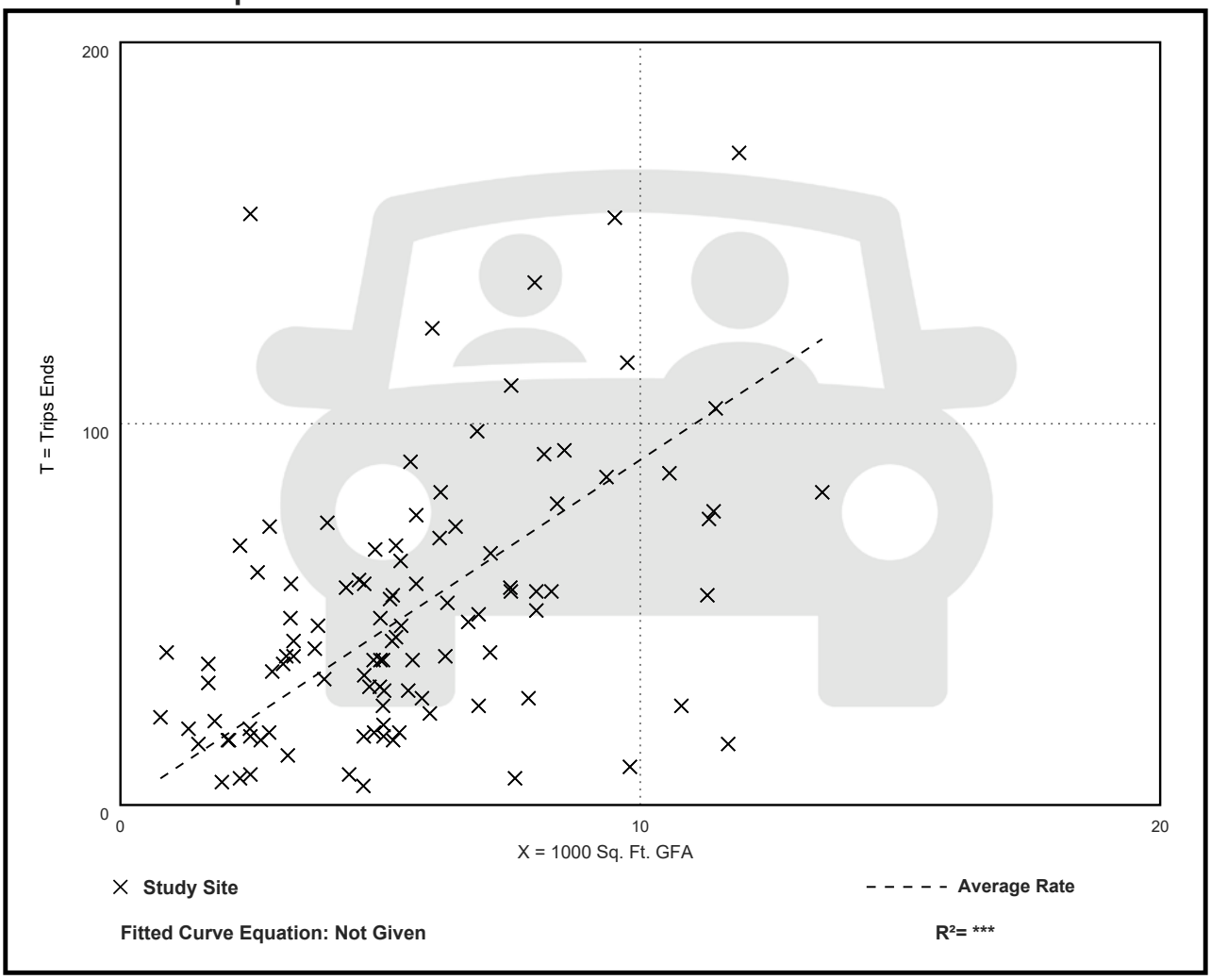
High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 104
Avg. 1000 Sq. Ft. GFA: 6
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation



APPENDIX B – City of Tustin VMT Screening Form

CITY OF TUSTIN
VMT SCREENING FORM FOR LAND USE PROJECTS

This form acknowledges the City of Tustin requirements for the evaluation of vehicle miles traveled (VMT) under CEQA.
The analysis provided in this form should follow the City of Tustin approved VMT Guidelines, dated February 13, 2024.

I. Project Description

Case Number:	GPA-2024-0001, CA-2024-0003, and ZC-2024-0001
Project Name:	Enderle Center Housing Overlay Zone
Project Location:	The Project is located at the southeast corner of 17th St and Carroll Way-Yorba St South.
Project Description:	413 housing units and 118,470 square feet (SF) of commercial use

Current GP Land Use:	PCCB	**Proposed GP Land Use:**	PCCB
Current Zoning:	PC COM	**Proposed Zoning:**	PC COM & HOD

Does the Project require a General Plan Amendment and/or Zone Change? **YES** X **NO**

II. VMT Screening Criteria

A. Is the Project 100% affordable housing?	**YES**		**NO**	X	Attachments:
B. Is the Project within 1/2 mile of qualifying transit?	**YES**		**NO**	X	Attachments:
C. Is the Project a local serving land use?	**YES**		**NO**	X	Attachments:
		Residential		Commercial	
D. Is the Project in a low VMT area?	**YES**	X	**NO**	X	Attachments:
E. Are the Project's Net Daily Trips less than 500 ADT?	**YES**		**NO**	X	Attachments:

Low VMT Area Evaluation:

City of Tustin VMT Thresholds		
Citywide Average Home-Based VMT[1] =	15.0	VMT/Capita
Citywide Average Employment VMT[1] =	25.1	VMT/Employee

[1] OCTAM 5.0 v.6.22.23 base year (2016) statistics.

Project Traffic Analysis Zone (TAZ)	VMT Rate for Project TAZ[1]		Type of Project	
1103	12.1	VMT/Capita	Residential:	X
	25.3	VMT/Employee	Non-Residential:	X

Trip Generation Evaluation:

Source of Trip Generation: Institute of Transportation Engineers (ITE), Trip Generation Manual,11th Edition, 2021

* Use trip rates from the latest edition of the ITE Trip Generation Manual or as approved by City Staff.

Project Trip Generation: 18,528 **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	X	% Trip Credit:
Pass-By Trip Credit:	YES		NO	X	% Trip Credit:
Affordable Housing Credit:	YES		NO	X	% Trip Credit:
Existing Land Use Trip Credit:	YES		NO	X	Trip Credit:

Net Project Trip Generation: 18,528 **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA? **YES** X **NO**

III. VMT Analysis Summary

A. Is additional VMT modeling required to evaluate impacts?

YES*	X	NO	

Projects that do not satisfy at least one (1) of the VMT screening criteria AND generate 2,400 or more net daily trips AND require a zone change/general plan amendment may require additional VMT modeling using OCTAM. Project that generates less than 2,400 daily trips may use the base TAZ rate for VMT analysis and mitigation purposes.

*A complete VMT analysis for the residential portion was conducted at the request of the City.

B. City of Tustin VMT Threshold of Significance:

Residential-VMT per Capita: City's Threshold: 15.0
Commercial-VMT per Employee : City's Threshold: 25.1

C. Unmitigated Project VMT Rate:

Residential-VMT per Capita: Base Year 2016:12.0 Future Year 2045: 12.2
Commercial-VMT per Employee: Base Year 2016:23.7 Future Year 2045:24.2

D. Does Unmitigated Project VMT Rate Exceed VMT Threshold?

YES		NO	x

E. Is mitigation required?

YES		NO	x

F. Percentage Reduction Required to Achieve the Citywide Average VMT:

G. Mitigation Measures:

Source:		
	VMT Reduction Mitigation Measure:	**Estimated VMT Reduction (%)**
1.	N/A	0.00%
2.	N/A	0.00%
3.	N/A	0.00%
4.	N/A	0.00%
5.	N/A	0.00%
6.	N/A	0.00%
7.	N/A	0.00%
8.	N/A	0.00%
9.	N/A	0.00%
10.	N/A	0.00%
	Total VMT Reduction (%)	

All mitigation measures are subject to become Conditions of Approval of the project. Provide attachments showing all VMT reduction calculations.

H. Mitigated Project TAZ VMT Rate:

I. Significance Finding:
(Less than significant, less than significant with mitigation, potential significant, etc.)

Less than significant

Prepared By		**Developer/Applicant**	
Company:	EPD Solutions	**Company:**	City of Tustin
Contact:	Abby Pal (abby@epdsolutions.com)	**Contact:**	Krys Saldivar
Address:	3333 Michelson Drive, Suite 500 Irvine, CA	**Address:**	300 Centennial Way, Tustin, CA 92780
Phone:	949-798-1180	**Phone:**	714-573-3172
Email:	techservices@epdsolutions.com	**Email:**	ksaldivar@tustinca.org
Date:	Revised 3/22/24	**Date:**	Revised 3/22/2024

Approved by:

Tustin Public Works Engineering	**Date**	**Tustin Community Development Planning**	**Date**

Development review and processing fees should be submitted with, or prior to the submittal of this Form.
The Public Works and/or Planning Division staff will not process the Form prior to fees being paid to the City.

OCTAM 5.0 v.6.22.23 Base Model Year 2016 VMT Statistics

Zone	Home-based VMT per Capita	Employment (commute) VMT per employee
759	8.8	25.2
832	23.6	33.8
851	23.5	34.3
857	16.0	26.0
859	13.0	25.2
863	16.9	25.3
1102	15.4	25.9
1103	12.1	25.3
1104	21.1	30.1
1105	12.2	25.1
1106	15.8	24.6
1107	14.5	24.3
1108	21.8	33.2
1109	11.6	24.4
1110	21.2	29.4
1111	13.8	24.6
1112	11.4	22.8
1113	10.7	23.6
1114	11.6	23.6
1115	14.1	24.4
1116	15.5	28.6
1117	12.1	24.3
1118	17.2	26.8
1119	15.0	26.0
1120	16.0	27.6
1121	12.9	23.3
1122	13.5	32.1
1123	11.6	22.5
1124	14.7	27.4
1125	16.8	24.5
1126	0.0	23.6
1127	17.5	27.4
1128	0.0	25.2
1129	17.2	28.0
1130	0.0	24.8
1131	18.0	25.7
1132	0.0	25.0
1133	0.0	0.0
1134	13.4	26.0
1135	0.0	0.0
1136	8.3	36.8
1137	17.2	29.6
1138	0.0	25.3

* Geography nests into OCTAM zone structure. VMT includes all VMT to/from specified geography, except for VMT that leaves OCTAM model area.

** Note that as OCTAM is updated, these statistics are subject to change.

Appendix E
Archaeological Resources Records Search

February 16, 2024

Jazmin Rodriguez
EPD Solutions
3333 Michelson Drive, Suite 500
Irvine, California 92660

RE: Archaeological Resources Records Search Results for the Enderle Center Project, Tustin, California (APNs 401-252-05, -06, -08, through -10, 401-253-03, and -04)

Dear Ms. Rodriguez:

An archaeological resources records search has been completed for the Enderle Center Project. The proposed approximately 11-acre project is located at the intersection of 17th Street and Enderle Center Drive (Assessor's Parcel Numbers [APNs] APNs 401-252-05, -06, -08, through -10, 401-253-03, and -04) within the city of Tustin, California. The subject property is situated within an unsectioned portion of Township 5 South, Range 9 West on the U.S. Geological Survey (USGS) *Orange*, *California* (7.5-minute) topographic quadrangle map. As part of the environmental review process, BFSA Environmental Services, a Perennial Company (BFSA), conducted an archaeological resources records search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton.

Archaeological Records Search Results

The archaeological resources records search was completed by BFSA at the SCCIC on August 22, 2023, and encompassed the project area as well as an additional 500 feet surrounding the project. Based upon the records search results, no resources are recorded within the project or the 500-foot buffer search area. No previous studies are recorded on the property, however, there are two studies recorded within the search area that are not specific to the subject property (Padon 1989; McKenna 2001).

BFSA requested a review of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC) on August 18, 2023, to determine if any recorded Native American sacred sites, or locations of religious or ceremonial importance are present within one mile of the project. The results of this search were received on October 3, 2023. The results were negative.

The full results of the SCCIC completed records search and the NAHC SLF search results are attached to this letter report (Attachments A and B). Please contact us should you have any questions or require additional study for this project.

Regards,

Tracy Stropes, M.A., RPA
Director/Principal Archaeologist
BFSA Environmental Services

Attachments:

Attachment A – Archaeological Records Search Results
Attachment B – NAHC Sacred Lands File Search Results

ATTACHMENT A

Archaeological Records Search Results

BFSA Environmental Services, a Perennial Company

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEMS

RECORDS SEARCH

Company:	BFSA Environmental Services, a Perennial Company
Processed By:	Emily T. Soong
Date Processed:	August 24, 2023
Project Identification:	Enderle Center
Information Center:	South Central Coastal Information Center
Search Radius:	500 Feet Buffer

Historical Resources:

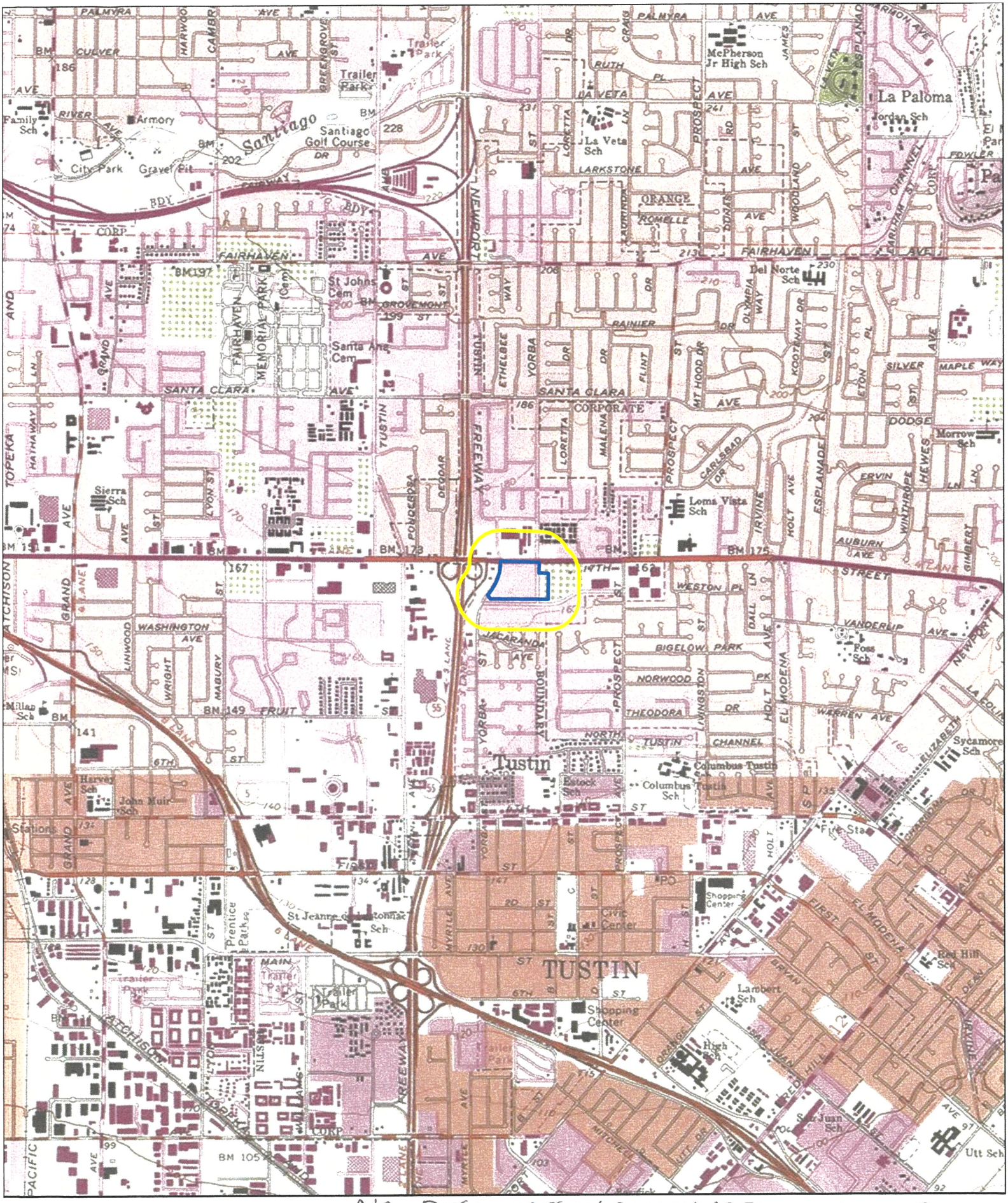
Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been reviewed for all recorded sites.

There are no resources located within a 500 feet radius of the current project area or within the subject property.

Previous Survey Report Boundaries:

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been reviewed.

There are two reports within a 500 feet radius of the current project area, none of which are located within the subject property.



NO RESOURCES IN SEARCH AREA

500 Ft Buffer

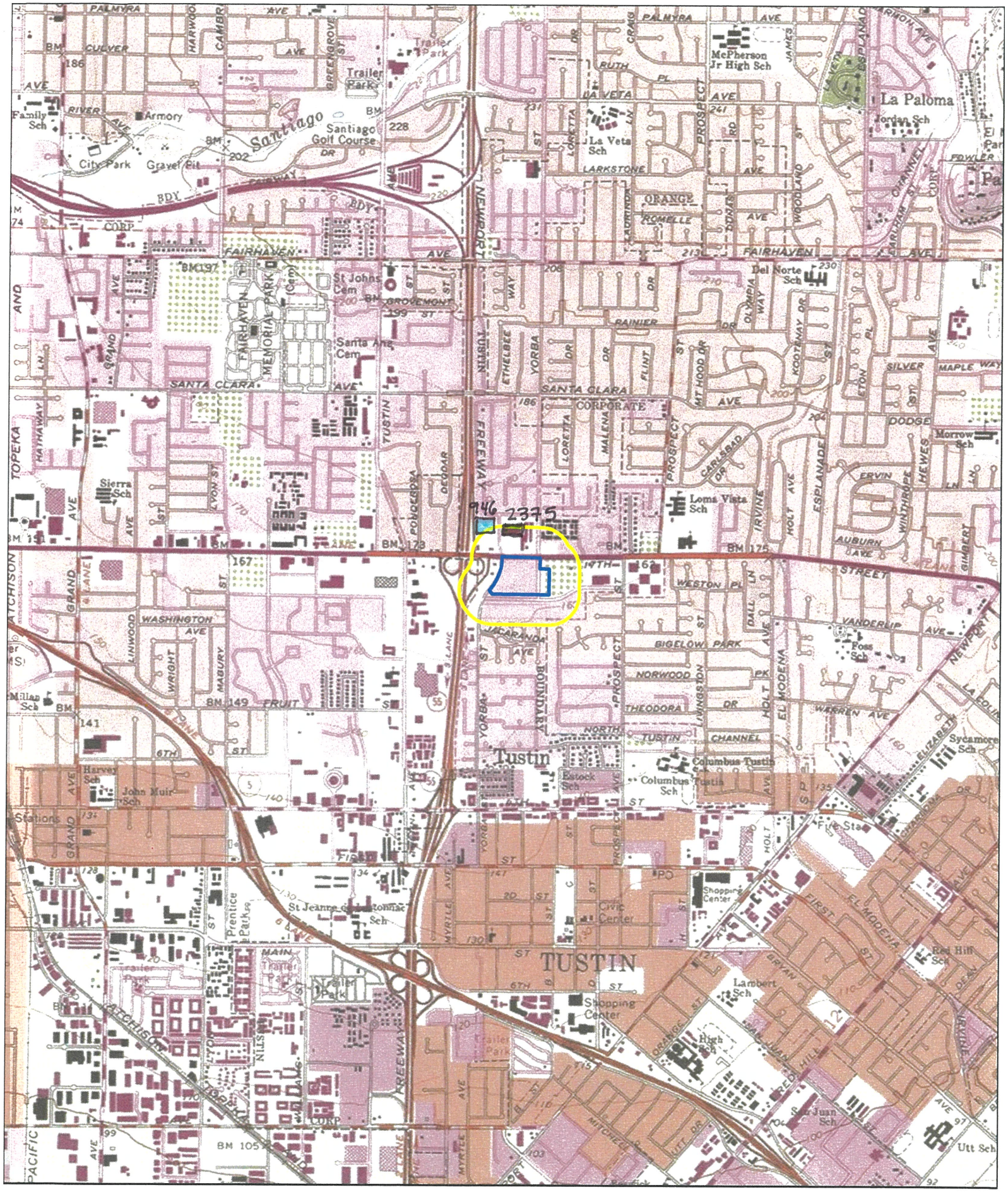
Project

Enderle Center Project
USGS *Orange* Quadrangle
(7.5-minute series)

N

Resource
1:24,000

ETS BFSAES: 8/18/2023



500 Ft Buffer

Project

Enderle Center Project
USGS *Orange* Quadrangle
(7.5-minute series)

N

Reports
1:24,000

ETS BFSAES: 8/18/2023

Report List

Ender Ie Center

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00946	Paleo -	1989	Padon, Beth	Archaeological and Paleontological Review for 13911, 13931, and 13951 Carroll Way, Tustin, Ca.	LSA Associates, Inc.	
OR-02375	Cellular -	2001	McKenna, Jeanette A.	Review of Culutral Resource Assessment/evaluation for Cingular Wireless Site Sc-001-01, Orange County, California	McKenna et al.	

ATTACHMENT B

NAHC Sacred Lands File Search Results

August 18, 2023

For: Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

From: Emily T. Soong
BFSA Environmental Services, a Perennial Company
14010 Poway Rd. Suite A
Poway, CA 92064

Re: Request for Sacred Lands File and Native American Contact List for the Enderle Center Project, Tustin, Orange County, California.

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: Enderle Center Project (Project No. 23-222). The project is an archaeological study located southeast of the intersection of Yorba Street and 17th Street (APNs 401-252-05, -06, -08, -09, -10, 401-253-03, -04), Tustin, Orange County, California. Specifically, the project is in an unsectioned portion of Township 5 South, Range 9 West as seen on the USGS *Orange*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.

Thank you for your time.

Sincerely,

Emily T. Soong
Graphics/GIS
Billing: 14010 Poway Road, Suite A, Poway, CA 92064
Phone: 858-484-0915
Email: esoong@bfsa.perennialenv.com

Attachments:
USGS 7.5 *Orange,* California, topographic maps with project area delineated.
Sacred Lands File request form

Sacred Lands File & Native American Contacts List Request
NATIVE AMERICAN HERITAGE COMMISSION
915 Capitol Mall, RM 364 ∗ Sacramento, CA 95814 ∗ (916) 653-4082
(916) 657-5390 – Fax ∗ nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: Enderle Center Project (Project No. 23-222)

County: Orange

USGS Quadrangle Name(s): *Orange*

Township 5 South, Range 9 West

Company/Firm/Agency: BFSA Environmental Services, a Perennial Company

Contact Person: Emily T. Soong

Street Address: 14010 Poway Road, Suite A

City: Poway Zip: 92064

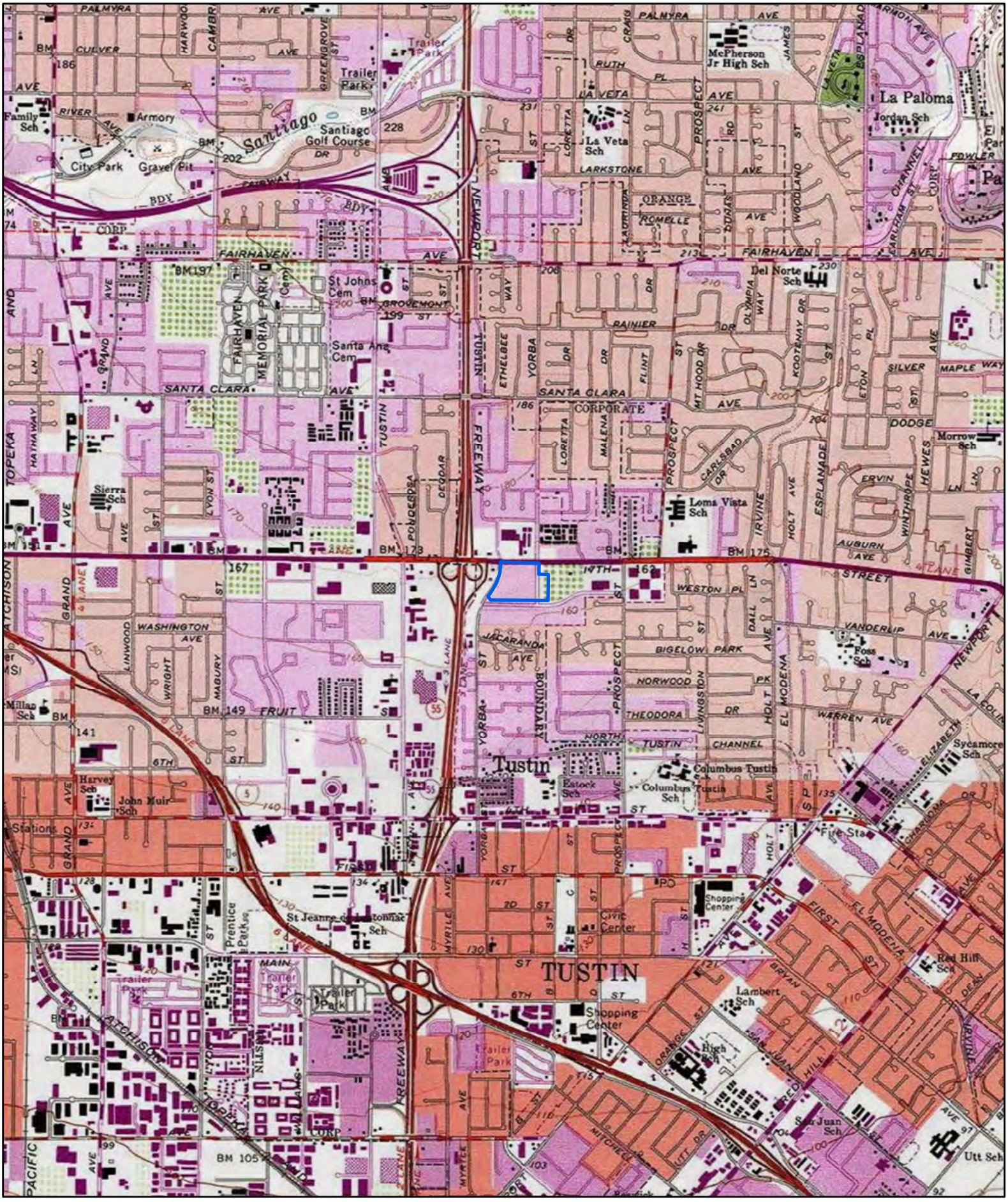
Phone: 858-484-0915

Fax: 858-679-9896

Email: esoong@bfsa.perennialenv.com

Project Description:

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: Enderle Center Project (Project No. 23-222). The project is an archaeological study located southeast of the intersection of Yorba Street and 17th Street (APNs 401-252-05, -06, -08, -09, -10, 401-253-03, -04), Tustin, Orange County, California. Specifically, the project is in an unsectioned portion of Township 5 South, Range 9 West as seen on the USGS *Orange*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.



Project

Enderle Center Project
USGS *Orange* Quadrangle
(7.5-minute series)

1:24,000

ETS BFSAES: 8/18/2023

From: NAHC@NAHC
To: Emily Soong
Cc: Green, Andrew@NAHC
Subject: RE: Request for Sacred Land Search for The Market Place Project (23-223)
Date: Saturday, August 19, 2023 9:16:27 AM
Attachments: image001.png
The Market Place Project Sacred Lands File form.pdf
The Market Place Project NAHC Search Request.pdf
The Market Place Map.pdf

This sender is trusted.

Hello,

Thank you for your message. We're in receipt of your request. We have recently hired new staff, and this change in our office is creating some delays. We estimate a turn-around time of 4 weeks and don't anticipate responding sooner than the end of that time frame. Please let us know if you have any questions.

Kind regards,

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
(916) 373-3710

From: Emily Soong <esoong@bfsa.perennialenv.com>
Sent: Friday, August 18, 2023 10:48 AM
To: NAHC@NAHC <NAHC@nahc.ca.gov>
Cc: Jenni Stropes <jstropes@bfsa.perennialenv.com>
Subject: Request for Sacred Land Search for The Market Place Project (23-223)

To whom it may concern,

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: The Market Place Project (Project No. 23-223). The project is an archaeological study located north of the intersection of Jamboree Road and Santa Ana Freeway (APNs 500-291-02, -04, -06, -07, -08, -11, -21, -23, -24, -25, -26, -27, 500-312-01, -02, -04, -06, -08, -09), Tustin, Orange County, California. Specifically, the project is in former Lomas De Santiago and San Joaquin Ranchos, Township 1 South, Range 6 West as seen on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.

Best regards,

Emily T. Soong
BFSA Environmental Services

Phone: 858-484-0915

Email: esoong@bfsa.perennialenv.com

14010 Poway Road, Suite A

Poway, CA 92064

www.bfsa-ca.com

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Vacant

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

October 3, 2023

Emily T. Soong
BFSA Environmental Services

Via Email to: esoong@bfsa.perennialenv.com

Re: Enderle Center Project, Orange County

Dear Ms. Soong:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Orange County
10/3/2023

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrieleno Band of Mission Indians - Kizh Nation	N	Christina Swindall Martinez, Secretary	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno Band of Mission Indians - Kizh Nation	N	Andrew Salas, Chairperson	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno/Tongva San Gabriel Band of Mission Indians	N	Anthony Morales, Chairperson	P.O. Box 693 San Gabriel, CA, 91778	(626) 483-3564	(626) 286-1262	GTTribalcouncil@aol.com	Gabrieleno
Gabrielino /Tongva Nation	N	Sandonne Goad, Chairperson	106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012	(951) 807-0479		sgoad@gabrielino-tongva.com	Gabrielino
Gabrielino Tongva Indians of California Tribal Council	N	Robert Dorame, Chairperson	P.O. Box 490 Bellflower, CA, 90707	(562) 761-6417	(562) 761-6417	gtongva@gmail.com	Gabrielino
Gabrielino Tongva Indians of California Tribal Council	N	Christina Conley, Cultural Resource Administrator	P.O. Box 941078 Simi Valley, CA, 93094	(626) 407-8761		christina.marsden@alumni.usc.edu	Gabrielino

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrielino-Tongva Tribe	N	Sam Dunlap, Cultural Resource Director	P.O. Box 3919 Seal Beach, CA, 90740	(909) 262-9351		tongvatcr@gmail.com	Gabrielino
Gabrielino-Tongva Tribe	N	Charles Alvarez, Chairperson	23454 Vanowen Street West Hills, CA, 91307	(310) 403-6048		Chavez1956metro@gmail.com	Gabrielino
Juaneno Band of Mission Indians Acjachemen Nation - Belardes	N	Joyce Perry, Cultural Resource Director	4955 Paseo Segovia Irvine, CA, 92603	(949) 293-8522		kaamalam@gmail.com	Juaneno
Juaneno Band of Mission Indians Acjachemen Nation 84A	N	Heidi Lucero, Chairperson, THPO	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(562) 879-2884		jbmian.chairwoman@gmail.com	Juaneno
Pala Band of Mission Indians	F	Alexis Wallick, Assistant THPO	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3537		awallick@palatribe.com	Cupeno Luiseno
Pala Band of Mission Indians	F	Shasta Gaughen, Tribal Historic Preservation Officer	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3515	(760) 742-3189	sgaughen@palatribe.com	Cupeno Luiseno
Santa Rosa Band of Cahuilla Indians	F	Lovina Redner, Tribal Chair	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	lsaul@santarosa-nsn.gov	Cahuilla

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	(951) 654-4198	jvaldez@soboba-nsn.gov	Cahuilla Luiseno
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Enderle Center Project, Orange County.