



SCS Dublin

Draft EIR | July 2022





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State Clearinghouse No. 2022040022

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1 Executive Summary

1.1 Purpose

This Draft Environmental Impact Report (EIR) has been prepared by the City of Dublin for the SCS Dublin development project (the “project” or “proposed project”). The City of Dublin is the “public agency which has the principal responsibility for carrying out or approving the project,” and as such is the “Lead Agency” under the California Environmental Quality Act (CEQA), as defined in CEQA Guidelines Section 15367. CEQA requires the Lead Agency to consider the information contained in the EIR prior to taking any discretionary action. This EIR is intended to serve as an informational document to be considered by the City and other permitting agencies during deliberations on the project.

This Executive Summary summarizes the requirements of the CEQA Statute and Guidelines, provides an overview of the project and alternatives, outlines the potential impacts of the project and the recommended mitigation measures, and discloses areas of controversy and issues to be resolved.

1.2 Project Description

The 76.2-acre project site is generally bound by Tassajara Road, Interstate 580, Brannigan Street and Gleason Drive. The project site is located in the Eastern Dublin Specific Plan (EDSP) area and has Planned Development Zoning (Resolution No. 104-94) adopted with the EDSP. The project site is surrounded by commercial uses to the west, southwest and southeast, a public park to the northwest, and residential uses to the north, northwest and east.

The proposed project is based on the Preferred Plan approved by City Council on February 15, 2022. The project proposes to develop 76.2 acres with a combination of commercial/retail and residential uses, including two types of retail experiences. The first is a more neighborhood main street experience. This area can accommodate up to 40,000 square feet of small retail shops along an extended Finnan Way, which would then connect to the Shops at Waterford. The second is envisioned to be a more regional retail experience, focused on entertainment uses, south of Dublin Boulevard. This area is proposed for up to 225,000 square feet of uses. In total, the proposed project includes development of up to 265,000 square feet of commercial/retail uses.

A variety of housing types are proposed by the applicant, including affordable housing, and housing for entry level buyers, with up to 550 market rate units plus up to 100 affordable units.

To accommodate the project, the applicant proposes to amend the City of Dublin General Plan (General Plan) and Eastern Dublin Specific Plan (EDSP) land use designations, organized into four primary Planning Areas (PAs). The proposed land use designations (described in [Chapter 3 Project Description](#)) are consistent with the land use patterns of the surrounding properties. As shown in [Table 1-1: SCS Dublin Land Use Summary](#), the proposed new General Plan and EDSP

land use designations are: General Commercial, Medium Density Residential, Medium-High Density Residential, Parks/Public Recreation and Public/Semi-Public.

Table 1-1: SCS Dublin Land Use Summary

Land Use Designations	Gross Acres	Res. Units	Du/Acre	Floor Area Ratio	Commercial sq. ft.
General Commercial	29.4	40	--	.19-.38	265,000
Medium-Density Residential	17	150	8.8	--	--
Medium-High Density Residential	21.1	360	17.1	--	--
Public/Semi-Public	3.8	100	26.3	--	--
Parks/Public Recreation	2.5	--	--	--	--
Total	73.8	650	--	--	265,000

Source: City of Dublin, 2022.

1.3 Project Objectives

The following project objectives are identified:

Mix of Uses / Quality of Product

1. Provide a balanced mix of residential and commercial uses in the Eastern Extended Planning Area that integrate into the existing urban systems and provide a safe and attractive environment for living and working as encouraged by General Plan Policy 2.6.4.A.1.
2. Provide uses that meet the Eastern Dublin Specific Plan's objective to have higher-density housing, adjacent to commercial and employment opportunities.
3. Provide land uses and high-quality architecture that complement existing, adjacent land uses and development.

Economic Growth

4. Have a positive contribution to the local economy through new capital investment, the creation of new jobs, and the expansion of the tax base.
5. Add commercial, entertainment, and hotel uses that will have a synergy with existing retail in the City.
6. Provide a mix of residential and commercial uses that achieves a financially feasible project.
7. Provide a project that balances housing with job-creating uses.
8. Develop a project that supports the success of the commercial uses through careful site planning and infrastructure design.

Housing

9. Add to the City's housing diversity in compliance with Housing Element Program 10 and General Plan Policy 2.6.1.A.1 through a variety of housing including entry-level housing, affordable housing, and family housing, all of which may accommodate senior residents. Housing products range from traditional single-family homes, courtyard homes, townhomes, and affordable apartments.
10. Expand and improve the City's housing supply by developing high-quality housing in a portion of a City-designated Priority Development Area, which is a location planned for growth under the Sustainable Communities Strategy for the Bay Area.
11. Increase housing on the project site beyond what was initially studied under the Eastern Dublin General Plan Amendment and Specific Plan EIR, which will help in state-wide efforts to alleviate California's housing crisis.
12. Dedicate a parcel at the prominent corner of Tassajara Road and Dublin Boulevard, large enough to permit a variety of affordable housing solutions, allowing the design and amount of affordable housing to be tailored to the community's needs.

Responsible Growth

13. Develop vacant and underutilized land in an urban area.
14. Locate commercial and residential uses where such uses can take advantage of existing infrastructure and utilities.
15. Provide attractive, well-landscaped commercial uses close to Interstate 580 as a buffer between the highway and residential uses and to further General Plan Policy 10.5.3.E.
16. Enhance the intersection of Tassajara Road and Dublin Boulevard consistent with General Plan Goal 10.6.2.

Connectivity

17. Complete existing infrastructure to support General Plan buildout conditions consistent with the Eastern Dublin Specific Plan.
18. Implement the City's Bicycle and Pedestrian Master Plan and enhance bicycle and pedestrian safety by providing on-site and off-site pedestrian and bicycle facilities that link with existing facilities along Tassajara Road, Gleason Drive, Central Parkway and Dublin Boulevard.
19. Reconfigure block size and provide publicly accessible parkways, park corridors and paths to improve pedestrian connectivity between residential and commercial uses including the extensions of Finnian Way and Aviano Way.
20. Provide and improve multimodal connections within the project and across adjacent arterial streets to facilitate pedestrian and bicycle activity between neighborhoods and within the development.

1.4 Significant Unavoidable Adverse Impacts

The project would result in the following significant unavoidable impacts:

- **Air Quality.** The project would cause construction impacts associated with the release of nitrogen oxides (NOx) that would exceed BAAQMD significance thresholds. Despite implementation of **MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment**, construction-related NOx emissions would remain significant and unavoidable. The project would also cause operational impacts associated with the release of reactive organic gases (ROG) and NOx that would exceed BAAQMD significance thresholds. Despite implementation of **MM AQ-2.4: Wood Burning Fireplaces**, operational emissions from ROG and NOx would remain significant and unavoidable. These impacts would occur through cumulative conditions.
- **Transportation.** Using either VMT scenario as described in **Section 17.5.3**, regional Retail/Recreation, including the proposed Topgolf, would result in a net increase in VMT to the planning area. Per City significance criteria, any net increase in VMT to the planning area would constitute a significant impact. Despite implementation of **MM AQ-2.5: Vehicle Trip Reduction** which requires the development of a qualifying Commute Trip Reduction (CTR)/ Transportation Demand Management (TDM) plan to reduce mobile emissions, as well as VMT for all uses (including the Topgolf development), VMT impacts would remain significant and unavoidable.

1.5 Summary of Project Alternatives

The following alternatives to the project are discussed in detail in **Chapter 19 Alternatives**.

Alternative 1 – No Project

The No Project Alternative would result in the project site remaining undeveloped for the foreseeable future.

Alternative 2 – Existing General Plan and Eastern Dublin Specific Plan

The Existing General Plan and Eastern Dublin Specific Plan Alternative would allow development consistent with existing planned land use designations and development densities as described in the General Plan and Eastern Dublin Specific Plan. This includes designations of Neighborhood Commercial, General Commercial, Medium High Density Residential, High Density Residential, and Public/Semi-Public. Most the site is designated General Commercial. The Eastern Dublin Specific Plan assumed a mid-density development of 261 residential units and 902,563 square feet of commercial.

Alternative 3 – Commercial Development Task Force Land Plan

The Commercial Development Task Force Land Plan Alternative would take into consideration the recommendations from the Community Development Task Force Summary and Key

Recommendations Report dated July 2014. The General Commercial land south of Dublin Boulevard (23 acres) would be developed with Office uses at 0.3 FAR = 300,564 sf. The development proposed north of Dublin Boulevard would remain the same.

1.6 Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the Lead Agency, including issues raised by agencies and the public, and it must also address issues to be resolved.

A Notice of Preparation (NOP) for the proposed project was issued on April 1, 2022. This NOP describing the project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period extending from April 1, 2022, through May 2, 2022. The NOP identified the potential for significant and insignificant impacts on the environment related to the following topical areas:

Included for Detailed EIR Analysis (Potentially Significant)	Excluded from Detailed EIR Analysis (Insignificant)
Aesthetics Air Quality Biological Resources Cultural and Tribal Resources Energy Conservation Geology and Soils Greenhouse Gas Emissions and Energy Conservation Hazards and Hazardous Materials Hydrology and Water Quality Land Use and Planning Noise and Vibration Population and Housing Public Services, Utilities, and Service Systems Transportation	Agricultural and Forestry Resources Mineral Resources

Additionally, a public scoping meeting was held on April 13, 2022, via the Zoom Video Communications platform. A summary of comments made are described in [Section 2.2.2 Scoping Meeting](#), below.

1.7 Issues to be Resolved

CEQA Guidelines Section 15123(b)(3) requires the summary section of an EIR to identify any "issues to be resolved including the choice among alternatives and how to mitigate significant effects."

The following major issues will be resolved by the City of Dublin in its decision process:

- Determine whether the EIR adequately describes the environmental impacts of the project;
- Choose among alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether additional mitigation measures need to be applied to the project.

1.8 Public Review of the Draft EIR

Upon completion of the Draft EIR, the City of Dublin filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review on the City's development activity webpage under the SCS Dublin project: <https://dublin-development.icitywork.com>.

Agencies, organizations, and interested parties may comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Amy Million, Principal Planner
City of Dublin, Community Development Department
100 Civic Plaza
Dublin, CA 94568
Phone: (925) 833-6610
Fax: (925) 833-6628
Email: amy.million@dublin.ca.gov

Upon completion of the public review period, written responses to environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearings before the Dublin Planning Commission and Dublin City Council, at which certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

1.9 Impacts of the Project

Table 1-2: Summary of Significant Impacts of the Proposed Project provides a summary of the significant impacts of the project. Impacts that were determined to be less than significant or beneficial (and thus not requiring mitigation) are not included in this table but are addressed in their respective resource chapter. The mitigation measures associated with each impact are to be implemented by the applicant to reduce the environmental impacts to a less than significant level, where possible. In accordance with CEQA, the impacts are classified as follows:

Class I – Significant and unavoidable impacts

Class II – Significant impacts that can be reduced to less than significant with mitigation

Table 1-2: Summary of Significant Impacts of the Proposed Project

Impact	Impact Significance	Mitigation
Aesthetics		
Impact AES-4: Introduce new light and glare to the project site and project area (Class II).	Less than Significant with Mitigation	MM AES-4.1: Exterior Lighting Control Plan
Impact AES-5: Contribute to cumulatively considerable aesthetic impacts (Class II).	Less than Significant with Mitigation	MM AES-4.1: Exterior Lighting Control Plan
Air Quality		
Impact AQ-1: Conflict with implementation of San Francisco Bay Area 2017 Clean Air Plan (Class I).	Significant and Unavoidable	MM AQ-2.1: BAAQMD Basic Construction Mitigation Measures MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment MM AQ-2.3: Architectural Coating MM AQ-2.4: Wood Burning Fireplaces
Impact AQ-2: Violates air quality standard or contributes substantially to an existing or projected air quality violation (Class I).	Significant and Unavoidable	MM AQ-2.1: BAAQMD Basic Construction Mitigation Measures MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment MM AQ-2.3: Architectural Coating MM AQ-2.4: Wood Burning Fireplaces MM AQ-2.5: Vehicle Trip Reduction
Impact AQ-5: Contribute to cumulatively considerable air quality impacts. (Class I).	Significant and Unavoidable	MM AQ-2.1: BAAQMD Basic Construction Mitigation Measures MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment MM AQ-2.3: Architectural Coating MM AQ-2.4: Wood Burning Fireplaces MM AQ-2.5: Vehicle Trip Reduction
Biological Resources		
Impact BIO-1: Have a substantial adverse effect on special-status plant and wildlife species (Class II).	Less than Significant with Mitigation	MM BIO-1.1: Special Status Plant Surveys MM BIO-1.2: Special-Status Plants Avoidance and Mitigation MM BIO-1.3: Burrowing Owl Avoidance and Exclusion Measures MM BIO-1.4: Nesting Bird Avoidance Measures
Impact BIO-3: Have a substantial adverse effect on wetlands or jurisdictional features (Class II).	Less than Significant with Mitigation	MM BIO-3.1: Wetland Mitigation Plan

Impact	Impact Significance	Mitigation
Impact BIO-6: Contribute to cumulatively considerable impacts on biological resources (Class II).	Less than Significant with Mitigation	MM BIO-1.1: Special Status Plant Surveys MM BIO-1.2: Special-Status Plants Avoidance and Mitigation MM BIO-1.3: Burrowing Owl Avoidance and Exclusion Measures MM BIO-1.4: Nesting Bird Avoidance Measures MM BIO-3.1: Wetland Mitigation Plan
Cultural & Tribal Cultural Resources		
Impact CR-1: Cause a substantial adverse change to a known archeological resource (Class II).	Less than significant with mitigation	MM CR-1.1: Historic or Archaeological Discovery During Construction
Impact CR-2: Directly impact a paleontological resource or unique geologic feature (Class II).	Less than significant with mitigation	MM CR-2.1: Paleontological Resource Monitoring
Impact CR-4: Contribute to cumulatively considerable effects on cultural resources (Class II).	Less than significant with mitigation	MM CR-1.1: Historic or Archaeological Discovery During Construction MM CR-2.1: Paleontological Resource Monitoring
Geology & Soils		
Impact GEO-1: Expose people or structures to potential risk of loss or injury associated with seismic hazards (Class II).	Less than Significant with Mitigation	MM GEO-1.1: Implement Preliminary Geotechnical Exploration Recommendations
Impact GEO-2: Trigger or accelerate substantial soil erosion or loss of topsoil (Class II).	Less than Significant with Mitigation	MM GEO-1.1: Implement Preliminary Geotechnical Exploration Recommendations
Impact GEO-3: Expose people or structures to substantial safety risks as a result of liquefaction (Class II).	Less than Significant with Mitigation	MM GEO-1.1: Implement Preliminary Geotechnical Exploration Recommendations
Impact GEO-4: Contribute to cumulatively considerable effects on geology and soils (Class II).	Less than Significant with Mitigation	MM GEO-1.1: Implement Preliminary Geotechnical Exploration Recommendations
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 or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (Class III).	Less than Significant	

Impact	Impact Significance	Mitigation
Hazards & Hazardous Materials		
Impact HAZ-1: Exposure to known hazardous contaminants (Class II).	Less than Significant with Mitigation	MM HAZ- 1.1: Disposal of Deleterious Materials.
Impact HAZ-4: Contribute to cumulatively considerable impacts to hazards and hazardous materials (Class II).	Less than Significant with Mitigation	MM HAZ- 1.1: Disposal of Deleterious Materials.
Hydrology & Water Quality		
No significant impacts identified.		
Land Use & Planning		
No significant impacts identified.		
Noise & Vibration		
Impact N-1: Would the Project generate 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? (Class II)	Less than Significant with Mitigation	MM N-1.1: Construction Noise Reduction MM N-1.2: Noise Attenuation
Impact N-4: Contribute to cumulatively considerable impacts on noise? (Class II)	Less than Significant with Mitigation	MM N-1.1: Construction Noise Reduction MM N-1.2: Noise Attenuation
Population & Housing		
No significant impacts identified.		
Public Services, Utilities & Service Systems		
No significant impacts identified.		
Transportation & Circulation		
TRANS-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) regarding Vehicle Miles Traveled (Class I).	Significant and Unavoidable with Mitigation	MM AQ-2.5: Vehicle Trip Reduction MM TRANS-2-1: Implement Bicycle and Pedestrian Improvements
TRANS 3: Increase hazards due to a geometric feature or incompatible uses (Class II).	Less than Significant with Mitigation	MM TRANS-3-1: Pedestrian & Bicycle Safety Plan

1.9.1 Cumulative Impacts

Under the CEQA Guidelines, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the environmental impact report (“EIR”) together with other projects causing related impacts.” (14 Cal Code Regs §15130(a)(1)). This EIR uses a “list of past, present, and probable future projects producing related or cumulative impacts.” (14 Cal Code Regs §15130(b)(1)(A)). Reasonably foreseeable projects that could contribute to the cumulative effects scenario are described for each relevant resource as described in this EIR.

The cumulative analysis concludes that the impacts of the project, when combined with impacts from past, present, and reasonable future projects would create impacts that would be considered cumulatively significant.

1.9.2 Growth-Inducing Effects

CEQA Guidelines Section 15126.2(d) provides the following guidance regarding growth-inducing impacts: a project is identified as growth inducing if it “could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” As addressed in [Chapter 20 Other CEQA Considerations](#), growth inducing components of the project would include increased housing and population, as well as labor requirements for construction. However, the project site is located within the City of Dublin and has been planned for development as anticipated in the City’s General Plan.

1.9.3 Significant Irreversible Commitment of Resources

CEQA Guidelines Section 15126.2(c) defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from permanent loss of habitat, damage caused by environmental accidents associated with project construction, or operational resource use.

Construction of the project would necessitate some use and long-term conversion of undeveloped land and vegetation and habitat removal, and the development of the project would, therefore, be considered a significant irretrievable commitment of habitat for threatened and endangered species.

Buildout of the project would commit nonrenewable resources during project construction and ongoing utility services during project operations. During project operations, oil, gas, and other nonrenewable resources would be consumed. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of both short-term and long-term project operations. Compliance with all applicable building codes, policies and goals, and the mitigation measures identified in this EIR would ensure that all-natural resources are conserved to the extent practical.

2 Introduction

This Environmental Impact Report (EIR) has been prepared to evaluate environmental impacts associated with the SCS Dublin project (the project) in the City of Dublin (State Clearinghouse No. 2022040022).

The City of Dublin is the public agency with the principal responsibility for approving the project, and as such is the Lead Agency for this project under the California Environmental Quality Act of 1970 (CEQA) as defined in CEQA Guidelines Section 15367. CEQA requires the Lead Agency to consider the information contained in the EIR prior to taking any discretionary action. This EIR is intended to serve as an informational document to be considered by the City of Dublin and other permitting agencies during their respective processing of permits for the project.

2.1 Purpose and Authority

This Draft EIR is being analyzed at a project level by the City of Dublin to assess the potential environmental impacts that may arise in connection with actions related to implementation of the project. Pursuant to CEQA Guidelines Section 15367, the City of Dublin is the Lead Agency for the project and has discretionary authority over the project and project approvals. The Draft EIR is intended to address all public infrastructure improvements and all future development that are within the parameters of the project.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction
- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found not to be Significant
- Areas of Known Controversy

2.1.1 Lead Agency Determination

The City of Dublin is designated as the Lead Agency for the project. CEQA Guidelines Section 15367 defines the lead agency as “...the public agency, which has the principal responsibility for carrying out or approving a project.” Other public agencies may use this Draft EIR in the decision-making or permit process and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by Kimley-Horn & Associates, Inc., an environmental consulting firm. Prior to public review, it was extensively reviewed and evaluated by the City of Dublin. This Draft EIR reflects the independent judgment and analysis of the City of Dublin as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel are provided in the references section at the end of each environmental resource analyzed.

2.1.2 Responsible and Trustee Agencies

Other agencies in addition to the City of Dublin will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these agencies and other public agencies, which may be required to grant approvals or coordinate with other agencies, as part of project implementation. These agencies may include but are not limited to the following:

- California Department of Transportation
- California Department of Fish and Wildlife
- California Regional Water Quality Control Board San Francisco Region
- Dublin Unified School District
- Dublin-San Ramon Services District
- Zone 7 Water Agency

Actions that are necessary to implement the project that must be taken by other agencies are:

- Issuance of Encroachment Permits (Caltrans)

2.2 Scope of the EIR

2.2.1 Notice of Preparation

This Draft EIR addresses the potential environmental effects of the project. The City of Dublin issued a Notice of Preparation (NOP) for the project on April 1, 2022, which circulated between April 1, 2022, and May 2, 2022, for the statutory 30-day public review period. The scope of this Draft EIR includes the potential environmental impacts identified in the NOP and issues raised by agencies and the public in response to the NOP.

Eight comment letters were received in response to the NOP. These letters are shown in **Table 2-1: NOP Comment Letters** and provided in **Appendix A: Notice of Preparation and Comment Letters**.

Table 2-1: NOP Comment Letters

Affiliation	Signatory	Date	Summary of Relevant Comments
State			
Native American Heritage Commission	Cody Campagne	4/14/2022	Comply with the tribal consultation requirements of CEQA per Assembly Bill (AB) 52 and Senate Bill (SB) 18.
California Department of Transportation	Mark Leong	4/29/2022	Comply with City Vehicle Miles Traveled (VMT) requirements for project analysis. Consider bike and pedestrian safety, stormwater runoff, potential floodplain impacts, potential right-of-way impacts, and construction noise. Comply with AB 52 requirements.
Department of Toxic Substances Control	Brian McAloon	5/2/2022	Consider the potential for hazards release, aerially deposited lead, sampling of backfill material, and pesticides in the analysis.
Local			
Dublin San Ramon Services District	Ryan Pendergraft	4/22/2022	Consider planned potable water supply, wastewater connection, and irrigation water supply in the analysis.
City of Pleasanton	Ellen Clark	4/22/22	Consider City of Pleasanton intersections and LOS policies, "Gateway" conditions, operations at ramps and bicycle and pedestrian improvements.
Dublin Unified School District	Chris Funk	4/29/2022	Consider potential effects on schools.
Alameda County Transportation Commission	Colin Dentel-Post	5/2/2022	Comply with Congestion Management Program (CMP) requirements. Consider impacts to the Metropolitan Transportation System and biking and walking. Utilize adequate mitigation measures when required.
Individuals			
City of Dublin citizen	Tom Evans	4/27/2022 and 4/28/2022	Consider potential effects on schools, hazards, hydrology and water quality, land use and planning, noise, population and housing, public

			services and utilities, transportation, and parking. Geology and soils analysis could be scoped out given compliance with the California Building Code (CBC).
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2.2.2 Scoping Meeting

Pursuant to CEQA Guidelines Section 15082(c)(1), the City of Dublin held a public scoping meeting for the project on April 13, 2022. The meeting was held virtually via the Zoom Video Communications platform. Three members of the public attended the meeting. A summary of their comments are as follows:

- Ensure that it is clear to the public that this EIR is a new, separate document from the EIRs that were prepared for previous projects proposed for the project site.
- Consider the impact the project would have on schools.
- Consider the impact the project would have as a result of greenhouse gas (GHG) emissions, especially emissions from increased traffic.
- Analyze alternatives to the project that would reduce significant unavoidable impacts.
- Appropriately notify the public of the EIR process. Expand the radius for nearby property owners and occupants to be noticed beyond the standard 300 feet. Utilize additional digital platforms for noticing.

2.2.3 Environmental Issues Significant Determination

The NOP identified the potential for significant and insignificant impacts on the environment related to the following topical areas:

Included for Detailed EIR Analysis (Potentially Significant)	Excluded from Detailed EIR Analysis (Insignificant)
Aesthetics Air Quality Biological Resources Cultural and Tribal Resources Energy Geology and Soils Greenhouse Gas Emissions & Energy Conservation Hazards and Hazardous Materials Hydrology and Water Quality Land Use and Planning Noise and Vibration Population and Housing Public Services, Utilities, and Service Systems Transportation and Circulation	Agricultural and Forestry Resources Mineral Resources

2.3 Required Permits and Approvals

The proposed project contemplates the following permits and approvals from the City of Dublin:

- General Plan Amendment
- Specific Plan Amendment
- Planned Development Rezone (Stage 1 and Stage 2 Development Plan)
- Development Agreement

Future permits and approvals from the City of Dublin required for the proposed project include:

- Tentative Tract Map(s) / Parcel Map(s)
- Site Development Review Permit(s)
- Grading and Improvement Plans (Ministerial)
- Building Permits (Ministerial)

- Master Sign Program/Site Development Review Permit

2.4 Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the Draft EIR has also been described. The documents and other sources that have been used in the preparation of this Draft EIR include but are not limited to:

- City of Dublin, *General Plan* 1985, as amended, 2022
- City of Dublin, *Eastern Dublin Specific Plan* 1994, updated 2022
- City of Dublin, *Eastern Dublin Specific Plan and General Plan Amendment EIR*, 1993
- City of Dublin, *Dublin Municipal Code*
- City of Dublin, *Streetscape Master Plan*, 2005
- Dublin-San Ramon Services District, *2020 Urban Water Management Plan*, 2021
- City of Dublin, *Eastern Dublin Scenic Corridor Policies and Standards*, 1996

These documents are specifically identified in the respective references sections of this Draft EIR. In accordance with CEQA Guidelines Section 15150(b), the General Plan, Eastern Dublin Specific Plan, Municipal Code, and the referenced documents and other sources used in the preparation of the Draft EIR are available for review at the City of Dublin Community Development Department.

2.5 Prior Environmental Analysis – At Dublin Project

2.5.1 At Dublin Project Summary

An EIR for the previously proposed “At Dublin” development project was prepared in 2018 for the project site. The EIR analyzed a project that included a number of land uses and conceptual site plan features that are similar to the proposed project but some project features and uses were changed, all of which are described below.

The At Dublin project consisted of up to 680 residential units and up to 454,500 square feet of commercial uses. To accommodate the project, the applicant proposed to redistribute and simplify the six existing General Plan/Eastern Dublin Specific Plan land use designations to four land use designations, organized into four Planning Areas (PAs). The proposed land use densities are shown in [Table 2-2: At Dublin Land Use Summary](#) with the SCS Dublin Project totals added for comparison.

Table 2-2: At Dublin Land Use Summary

Land Use Designations	Gross Acres	Res. Units	Du/Acre	Floor Area Ratio	Commercial sq. ft.
General Commercial	23.7	--	--	.4	370,000
Mixed-Use	16.2	300	--	.7	84,500
Medium-High Density Residential	14.0	200	14.3	--	
Medium-Density Residential	23.8	180	7.6	--	--
Total	76.9	680	--	--	454,500
SCS Dublin Project Total	73.8	650			265,000

Source: City of Dublin, 2018 and 2022.

Other differences between the two projects include changes to roadway and pedestrian circulation surrounding and through the project site, and different park and open space configurations.

2.5.2 Context for this EIR

While the At Dublin project was neither approved nor the EIR certified by the Dublin City Council, a number of technical studies and the environmental analysis prepared for the project remain relevant to the proposed project and have been utilized in the preparation of this EIR. In particular, the technical studies associated with the following environmental resource sections (as presented in the Appendices to this EIR) were used as part of the CEQA analysis:

- Geology and Soils
- Hazards and Hazardous Materials

The proposed project is seeking entitlement for a General Plan and Eastern Dublin Specific Plan Amendment, a Planned Development Rezone with a Stage 1 and Stage 2 Development Plan and a Development Agreement. Subsequent discretionary approvals will include a Site Development Review Permit(s) and Tentative Tract Map(s).

Because the previous At Dublin project and the proposed SCS Dublin project are conceptually similar in their designation of planning areas and land uses and the At Dublin project was analyzed relatively recently (in 2018), some of the technical assumptions associated with the civil engineering elements of the At Dublin project (which have not been defined as yet for the proposed project) were used as the basis of analysis in this EIR. These include grading (which would result in a net import but the actual cut and fill amounts between the two projects may vary) and geotechnical considerations.

Upon EIR certification and project approval by the Dublin City Council, the project applicant will be required to submit detailed civil engineering and architectural plans as part of the Site

Development Review Permit and Tentative Tract Map process, which will be required to comply with all applicable City, State, and federal regulations as described in this EIR.

2.6 Documents Prepared for the Project

The following technical studies and analyses were prepared for the proposed project and are included as part of each respective Appendix:

- B Air Quality and Greenhouse Gas Emissions Analysis (supporting technical data)
- C Biological Resources Assessment and Supporting Surveys
- D Preliminary Geotechnical Exploration
- E Phase 1 Environmental Site Assessment
- F Noise Analysis (supporting technical data)
- G Water Supply Assessment
- H Energy Conservation Technical Data

2.7 EIR Organization

Pursuant to CEQA Guidelines Section 15120(c), this EIR contains the information and analysis required by CEQA Guidelines Sections 15122 through 15131. Each of the required elements is covered in one of the EIR chapters and appendices, organized as follows.

Executive Summary. A summary description of the project, the alternatives, their respective environmental impacts and the Environmentally Superior Alternative.

Introduction. A discussion of the background, purpose and need for the project, briefly describing the project, and outlining the public agency use of the EIR.

Project Description. Detailed description of the project.

Environmental Analysis. A comprehensive analysis and assessment of impacts and mitigation measures for the project. This section is divided into separate chapters for each environmental resource and contains the environmental settings and impacts of the project. A description of the approach to cumulative impacts analysis is presented in [Chapter 4: Introduction to Environmental Analysis](#), and cumulative impacts are at the end of each environmental resource.

Alternatives. This chapter includes a description of the alternatives evaluation process, as well as a description of alternatives considered but eliminated from further analysis and the rationale thereof. This section also includes an analysis and assessment of impacts for alternatives retained, including the No Project Alternative.

Other CEQA Considerations. A discussion of growth-inducing effects, long-term implications of the project, and significant environmental effects that cannot be avoided if the project is implemented.

EIR Preparers. Provides a list of City staff and consultants responsible for preparation of this EIR.

Appendices. Copies of project-related appendices are available on the City of Dublin's website at: <https://dublin-development.icitywork.com/>

2.8 Review of the Draft EIR

Upon completion of the Draft EIR, the City of Dublin filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review on the City's development activity webpage under the SCS Dublin project: <https://dublin-development.icitywork.com/> and the City of Dublin website.

Agencies, organizations, and interested parties may comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Amy Million, Principal Planner
City of Dublin
Community Development Department
100 Civic Plaza
Dublin, CA 94568
Phone: (925) 833-6610
Email: amy.million@dublin.ca.gov

Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearings on the project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

3 Project Description

3.1 Project Location and Setting

3.1.1 Location

As shown in [Figure 3-1: Project Location](#), the approximate 76.2-acre project site is in the City of Dublin, Alameda County, north of Interstate 580 and between Tassajara Road and Brannigan Street, extending just north of Gleason Drive. The project site is located on the Livermore, California, United States Geological Survey 7.5-minute topographic quadrangle map Township 2S, Range 1E, and Section 33 (northern portion) and Township 3S, Range 1E, and Section 4 (southern portion).

3.1.2 Existing Setting

The project site is vacant land and is generally flat with a slight slope from a higher elevation at the northerly boundary to a slightly lower elevation towards the southerly boundary. At one time the property was used for agricultural purposes and has remained vacant (except for temporary seasonal uses) with low lying native and non-native grasses turned periodically for the purposes of weed abatement. A small group of trees and shrubs is located near the corner of Tassajara Road and Central Parkway. No grading for development purposes has occurred to date. The project site is bisected by three City streets running generally east-west, Gleason Drive, Central Parkway, and Dublin Boulevard, that were developed to allow for development to the east.

3.1.3 Surrounding Land Uses

As shown in [Figure 3-2: Surrounding Land Uses](#), the project site is surrounded by a broad mix of residential and commercial uses. Single-family residential uses are located to the north. Multi-family residential, general commercial, and a vacant parcel at the southeast corner of Dublin Boulevard and Brannigan Street are located to the east. Interstate 580 and the City of Pleasanton are located to the south. Multi-family residential, parks/public recreation, general commercial, and campus office uses are located to the west.

3.1.4 Existing Plans and Zoning

Dublin General Plan

As shown in [Figure 3-3: Existing General Plan Land Use Designations](#), the existing General Plan land use designation in the southern and western portions of the project site is General Commercial. The northern and eastern portions of the project site are designated Medium Density Residential, Public/Semi-Public, Medium-High Density Residential, and Neighborhood Commercial. Most of the site, excluding the most northerly portion, is located within the Airport Influence Area (AIA)/Overlay Zoning District. This area is designated as an area in which current or future airport-related noise, overflight, safety and/or airspace protection factors may

affect land uses or necessitate restrictions on those uses. The AIA is a designation by the Alameda County Airport Land Use Commission.

The same portion of the project site within the AIA is also located within Land Use Compatibility Zone 7 of the Livermore Municipal Airport, as established in the Livermore Executive Airport Land Use Compatibility Plan.

The following General Plan land use designations surround the project site: Medium-Density Residential to the north; Medium-Density Residential, Medium/High-Density Residential, High-Density Residential, General Commercial, and General Commercial/Campus Office to the east; and Parks/Public Recreation, General Commercial and Campus Office to the west.

Eastern Dublin Specific Plan

On May 10, 1993, the Dublin City Council adopted Resolution No. 51-93 certifying an Environmental Impact Report for the Eastern Dublin General Plan Amendment and Specific Plan (EDSP EIR, SCH #91103064). The certified EDSP EIR consisted of a Draft EIR and Responses to Comments bound volumes, as well as an Addendum to the EDSP EIR dated May 4, 1993, assessing a reduced development project alternative. The City Council adopted Resolution No. 53-93 approving a General Plan Amendment and Specific Plan for the reduced area alternative on May 10, 1993. On August 22, 1994, the City Council adopted a second Addendum updating wastewater disposal plans for eastern Dublin. The EDSP EIR evaluated the potential environmental effects of urbanizing eastern Dublin over a 20 to 30-year period. Since certification of the EDSP EIR, many implementing projects have been proposed, relying to various degrees on the certified EDSP EIR.

As part of the certification of the EDSP EIR, the Dublin City Council adopted a Statement of Overriding Considerations for the following impacts: cumulative traffic, extension of certain community facilities (natural gas, electric and telephone service), regional air quality, noise and visual.

In 2005, the Eastern Dublin Specific Plan (EDSP) was amended to expand the boundaries eastward to encompass the Fallon Village development. Following the 2005 amendment, the buildout potential of the EDSP is 32,023 residents, 13,913 dwelling units, and 29,424 jobs.

As described in **Table 3-1: Eastern Dublin Specific Plan Anticipated Project Site Development** below, the EDSP anticipated within the mid-density range of development of 261 residential units and 902,563 square feet of commercial on the project site.

Table 3-1: Eastern Dublin Specific Plan Anticipated Project Site Development

Land Use Designation	Acres ¹	Residential Units	Commercial Square Footage
General Commercial	60.3	--	846,153
Neighborhood Commercial	3.7	--	56,410
Medium Density Residential	4.3	43	--
Medium-High Density Residential	5.3	106	--
High Density Residential	3.2	112	--
Public / Semi – Public	3.3	--	--
Total	80.1	261	902,563

Notes:

(1) Acreages shown are approximate and were based on information available at the time the Specific Plan was adopted

Source: Eastern Dublin Specific Plan, 1993, as amended.

Zoning

As shown in **Figure 3-4: Existing Zoning**, the project site is zoned Planned Development (PD) Resolution No. 104-94 adopted as part of the EDSP. This PD Pre-zoning allowed for the annexation of 1,538 acres. The purpose of the PD is to allow the flexibility needed to encourage innovative development while ensuring that the goals, policies and action programs of the General Plan and Eastern Dublin Specific Plan are met. More particularly, the PD is intended to ensure the following policies:

- A. Allow and encourage mixed use residential and commercial development in order to meet specific housing and employment needs, reduce vehicular trips, and foster pedestrian access to shopping and employment areas.
- B. Concentrate development on less environmentally and visually sensitive or constrained portions of the plan area and preserve significant open space areas and natural and topographic landscape features with minimum alteration of landforms.
- C. Encourage innovative approaches to site planning, building design and construction to create housing products for all segments of the community, including commercial and office structures.
- D. Encourage higher intensity development near transit corridors.
- E. Create an attractive, efficient and safe environment.
- F. Develop an environment that encourages social interaction and the use of common open areas for neighborhood or community activities and other amenities.
- G. Create an environment that decreases dependence on the private automobile.

3.2 Project Development Components

The proposed project is based on the Preferred Plan approved by City Council on February 15, 2022. The project proposes to develop 76.2 acres with a combination of commercial/retail and residential uses, including two types of retail experiences. The first retail experience, on approximately 5.8 acres, is a more neighborhood main street experience. This area could accommodate up to 40,000 square feet of small retail shops along an extended Finnan Way, which would then connect to the Shops at Waterford, and up to 40 residential units located above or behind the retail shops.

The second retail experience, on approximately 23.2 acres, is envisioned to be a more regional retail experience, focused on entertainment uses, south of Dublin Boulevard. This area is proposed for up to 225,000 square feet of uses. In total, the proposed project includes development of up to 265,000 square feet of commercial/retail uses.

On the remaining approximately 44.8 acres, the applicant proposes a variety of housing types, including affordable housing and housing for entry level buyers, with up to 550 market rate units plus up to 100 affordable units, along with parks and open space. The project would require an amendment to the General Plan and Eastern Dublin Specific Plan to modify the existing land use designations.

To accommodate the project, the applicant proposes to amend the General Plan and EDSP land use designations, organized into four primary Planning Areas (PAs). As shown in [Figure 3-5: Proposed General Plan Land Use Designations](#), the proposed land use designations are consistent with the land use patterns of the surrounding properties. As shown in [Table 3-2: SCS Dublin Land Use Summary](#), the proposed General Plan and EDSP land use designations are: General Commercial, Medium-Density Residential, Medium/High-Density Residential, Parks/Public Recreation and Public/Semi-Public.

Table 3-2: SCS Dublin Land Use Summary

Land Use Designations	Gross Acres	Res. Units	Du/Acre	Floor Area Ratio	Commercial sq. ft.
General Commercial	29.4	40	--	.19-.38	265,000
Medium-Density Residential	17	150	8.8	--	--
Medium-High Density Residential	21.1	360	17.1	--	--
Public/Semi-Public	3.8	100	26.3	--	--
Parks/Public Recreation	2.5	--	--	--	--
Total	73.8	650	--	--	265,000

Source: City of Dublin, 2022.

3.3 Project Objectives

CEQA Guidelines Section 15124 requires that a clearly written statement of the project's objectives be presented in an EIR to help lead agencies develop a reasonable range of

alternatives, and to aid the decision makers in preparing findings of significant effects or a statement of overriding considerations, as necessary.

The project's objectives are the following:

Mix of Uses/Quality of Product

1. Provide a balanced mix of residential and commercial uses in the Eastern Extended Planning Area that integrate into the existing urban systems and provide a safe and attractive environment for living and working as encouraged by General Plan Policy 2.6.4.A.1.
2. Provide uses that meet the Eastern Dublin Specific Plan's objective to have higher-density housing, adjacent to commercial and employment opportunities.
3. Provide land uses and high-quality architecture that complement existing, adjacent land uses and development.

Economic Growth

4. Have a positive contribution to the local economy through new capital investment, the creation of new jobs, and the expansion of the tax base.
5. Add commercial, entertainment, and hotel uses that will have a synergy with existing retail uses in the City.
6. Provide a mix of residential and commercial uses that achieves a financially feasible project.
7. Provide a project that balances housing with job-creating uses.
8. Develop a project that supports the success of the commercial uses through careful site planning and infrastructure design.

Housing

9. Add to the City's housing diversity in compliance with Housing Element Program 10 and General Plan Policy 2.6.1.A.1 through a variety of housing including entry-level housing, affordable housing, and family housing, all of which may accommodate senior residents. Housing products range from single-family homes, courtyard homes, townhomes, and affordable apartments.
10. Expand and improve the City's housing supply by developing high-quality housing in a portion of a City-designated Priority Development Area, which is a location planned for growth under the Sustainable Communities Strategy for the Bay Area.
11. Increase housing on the project site beyond what was initially studied under the Eastern Dublin General Plan Amendment and Specific Plan EIR, which will help in state-wide efforts to alleviate California's housing crisis.

12. Dedicate a parcel at the prominent corner of Tassajara Road and Dublin Boulevard, large enough to permit a variety of affordable housing solutions, allowing the design and amount of affordable housing to be tailored to the community's needs.

Responsible Growth

13. Develop vacant and underutilized land in an urban area.
14. Locate commercial and residential uses where such uses can take advantage of existing infrastructure and utilities.
15. Provide attractive, well-landscaped commercial uses close to Interstate 580 as a buffer between the highway and residential uses and to further General Plan Policy 10.5.3.E.
16. Enhance the intersection of Tassajara Road and Dublin Boulevard consistent with General Plan Goal 10.6.2.

Connectivity

17. Complete existing infrastructure to support General Plan buildout conditions consistent with the Eastern Dublin Specific Plan.
18. Implement the City's Bicycle and Pedestrian Master Plan and enhance bicycle and pedestrian safety by providing on-site and off-site pedestrian and bicycle facilities that link with existing facilities along Tassajara Road, Gleason Drive, Central Parkway and Dublin Boulevard.
19. Reconfigure block size and provide publicly accessible parkways, park corridors and paths to improve pedestrian connectivity between residential and commercial uses including the extensions of Finnian Way and Aviano Way.
20. Provide and improve multimodal connections within the project and across adjacent arterial streets to facilitate pedestrian and bicycle activity between neighborhoods and within the development.

3.4 Land Uses

A conceptual illustration of proposed land uses is shown in [Figure 3-6: Illustrative Site Plan](#). Conceptual illustrations of the elevations of the various land uses are shown in [Figures 3-7 \(a-b\): Project Renderings](#). These land uses are described below, according to the respective proposed land use designations.

3.4.1 General Commercial

General Commercial is proposed on approximately 29.4 gross acres on the property with up to 265,000 square feet of commercial uses. This includes approximately 23.2 acres within Planning Area 1 (PA-1), south of Dublin Boulevard and north of Interstate 580 and approximately 5.8 acres in PA-2, north of Dublin Boulevard, along the proposed Finnian Way extension. The permitted floor area ratio (FAR) for General Commercial is .20 to .60.

PA-1 is proposed as an entertainment district with a combination regional- and community-serving retail, service, and office uses, restaurants, family entertainment uses, and outdoor plazas for a total of 225,000 square feet of commercial uses. Of this, an approximately 80,000 square foot entertainment driving range is envisioned (based on preliminary applicant discussions with Topgolf, a private sports entertainment company). PA-1 may also include a 140-room hotel.

The General Commercial area of PA-2 focuses on the neighborhood main street experience anchored by a town square. This area would accommodate up to 40,000 square feet of small retail shops, small office spaces, and specialty restaurants along the extension of Finnan Way, which would then connect to the Shops at Waterford. Up to 40 residential units would be located above or behind the retail shops along Finnan Way.

3.4.2 Medium-Density Residential

Medium-Density Residential is proposed for approximately 17 acres on the northerly portion of the project site within PA-3 and PA-4. The permitted density is 6.1 to 14.0 units per gross acre. Housing within the Medium-Density Residential designation would consist of up to 150 residential units.

3.4.3 Medium/High-Density Residential

Medium/High-Density Residential is proposed for approximately 21.1 acres in PA-2 and PA-3. The permitted density is 14.1-25.0 units per gross acre. Housing within the Medium/High-Density Residential designation would consist of up to 360 residential units.

3.4.4 Public/Semi-Public

Approximately 3.8 gross acres in PA-2 north of Dublin Boulevard on the Tassajara Road frontage is proposed for Public/Semi-Public uses. Public/Semi-Public allows for a combination of public facility and semi-public facility land uses including the development of housing when it is developed by a non-profit entity and serves to meet affordable housing needs of an underserved economic segment of the community. Affordable housing within the Public/Semi-Public designation would consist of up to 100 residential units.

3.4.5 Parks/Public Recreation

As shown in [Figure 3-6: Illustrative Site Plan](#), project development would include plazas, a town square, and a grand paseo.

The Parks/Public Recreation designation is proposed for approximately 2.5 gross acres and includes publicly owned parks and recreation facilities to accommodate the proposed grand paseo. In order to accommodate a variety of activities (e.g., recreation, public gardening, and native plant/pollinator meadows) and complement adjacent land uses, the width of the grand paseo varies from 25 feet to 110 feet.

3.5 Site Access and Circulation

3.5.1 Vehicular Circulation

As shown in **Figure 3-6: Illustrative Site Plan**, the project would contain several ingress/egress points from public roadways. New public streets, including Diablo View Road and extensions to Finnian Way and Aviano Way, as well as private streets would be incorporated into the project to allow for access to the interior residential, commercial and mixed-use developments. Due to the lower traffic volumes and limited vehicular access, private streets may be designed with a narrower profile. Where the blocks are short and would have low traffic volumes, private streets may not include features typically associated with public streets including sidewalks and on-street parking. All internal streets and roadways would be privately owned and maintained by the respective owner association.

A new north/south street located between Brannigan Street and Tassajara Road is proposed along the east side of the grand paseo creating greater access to and activity in the public open space. Generous bike and pedestrian paths along the grand paseo would connect Gleason Drive to Dublin Boulevard. The project would also extend Aviano Way and Finnian Way to Tassajara Road. Therefore, creating additional vehicle and pedestrian access points.

3.5.2 Off-Site Roadway Improvements

The project site is surrounded by public roadways, which would be improved as follows:

- **Tassajara Road** – Improve the right-of-way along the east edge of the project site, completing the outside travel lane(s), Class II bike lane, and parkway inclusive of a sidewalk. The off-site improvements along the project frontage would vary between intersections to accommodate turn lane requirements. The project would add a fourth leg (east leg) and subsequent lanes and movements into and out of this leg to the existing intersection of Tassajara Road and The Shops. The project also proposes to add right-in/right-out driveways along the east side of Tassajara Road between Dublin Boulevard and the Shops, the Shops and Central Parkway, and two between Central Parkway and Gleason Drive.
- **Dublin Boulevard** – Improve the right-of-way along the north and south edge of the project site by completing the outside travel lane(s), Class II bike lane, and parkways inclusive of sidewalks on both sides of the roadway. The improvements would vary between intersections to accommodate turn lane requirements. The project also proposes to add a right-in/right-out driveway on the south side of Dublin Boulevard.
- **Central Parkway** – Improve the right-of-way to accommodate the completion of the outside travel lane in each direction, Class II bike lane, on-street parking, and parkways inclusive of a sidewalk on the south side and a multi-use trail on the north side. The project also includes a proposed mid-block pedestrian crossing on Central Parkway. The project also proposes right-in/right-out driveways on the north and south side of Central Parkway.

- **Gleason Drive** – Improve the right-of-way, which would include an added travel lane in each direction, Class II bike lane, and parkways inclusive of sidewalk on both sides. The project also proposes a right-in/right-out driveway on the north side of Gleason Drive.
- **Brannigan Street** – Improve the west side of the street to accommodate on-street parking and a parkway inclusive of a sidewalk. The project proposes to add a fourth leg (west leg) at the intersection of Brannigan Street and Aviano Way. The eastbound approach at this intersection would be stop-controlled with a shared left-right turn lane. In addition, the project proposes to add a fourth leg (west leg) at the intersection of Brannigan Street and Finnian Way. The eastbound approach at this intersection would be stop-controlled with a shared left-right turn lane. The project proposes to add an additional driveway at the existing bend along Brannigan Street.
- **Finnian Way (proposed public street)** – Extend Finnian Way from Brannigan Street to Tassajara Road. The proposed street section would have two travel lanes, parking, bike lanes and wider than standard sidewalks (approximately 15 feet).
- **Aviano Way (proposed public street)** - Extend Aviano Way from Brannigan Street to Tassajara Road. The proposed street section would have two travel lanes, parking, and sidewalks.
- **Diablo View Road (proposed public street)** – A new public street fronting along the east side of the grand paseo. The proposed street would have two travel lanes, parking and sidewalks.

Off-site improvements would complete these segments to their designed build-out condition, tying into the existing adjacent improved roadways and parkways.

3.5.3 Bicycles, and Pedestrians

The public roadways surrounding the project site would be completed in accordance with the City's Bicycle and Pedestrian Master Plan, including the incorporation of Class II bike lanes along Dublin Boulevard, westbound on Central Parkway and through Finnian Way.

The pedestrian and bicycle-oriented paseo would serve the new development as well as the larger neighborhood. The paseo varies from 25 to 110 feet wide and widens towards Tassajara Road inviting pedestrians and bikes off the major arterial onto the paseo. Bike and pedestrian paths would connect Gleason Drive to Dublin Boulevard.

Walkways would extend along the perimeter of the project, providing connections to the existing pedestrian network.

3.5.4 Public Transit

Bus stops suitable for use by Livermore Amador Valley Transit Authority (LAVTA) would be constructed on the project frontage streets of Tassajara Road, Gleason Drive, Central Parkway and Dublin Boulevard.

3.6 Site Preparation and Infrastructure Improvements

3.6.1 Grading

As detailed in [Section 2.5.2, Context for this EIR](#), the grading quantities for the previously proposed At Dublin project are used as anticipated grading quantities for the proposed project as a result of the similarity between the two projects. As shown in [Table 3-3: Grading Requirements \(by Planning Area\)](#), proposed project construction is estimated to require 449,600 cubic yards of cut and 560,800 cubic yards of fill for an estimated net import of 111,200 cubic yards of soil. Excess fill would be utilized on-site to minimize the import of soils. PA-1 would require the majority of the imported soils, PA-2 would balance, and PA-3 and PA-4 would balance between the two areas. The imported soils would originate from available borrow sites, preferably within the Tri-Valley area.

Table 3-3: Grading Requirements (by Planning Area)

Planning Area	Cut (CY)	Fill (CY)
PA-1	124,300	235,600
PA-2	171,000	169,500
PA-3	129,500	140,400
PA-4	24,800	15,300
Total	449,600	560,800
Net Import	--	111,200

CY – Cubic Yards
Source: RJA, 2017.

3.6.2 Water

The project site is located within the boundaries of the Dublin-San Ramon Services District (DSRSD), which serves the City of Dublin with potable water and non-potable recycled water. DSRSD currently has a moratorium on any new recycled water connections and therefore the project would connect to existing underground potable DSRSD water lines located within the right-of-way of the adjacent roadways. Multiple connections would be provided for the purpose of achieving a “looped system.” As such, potable water would be used for domestic use and landscape irrigation.

3.6.3 Wastewater

The project site is located within the boundaries of DSRSD, which provides the City of Dublin with sanitary sewer services. The project would connect to existing underground DSRSD sewer lines located within the right-of-way of the adjacent roadways. Multiple laterals would connect the project to the sewer line.

3.6.4 Stormwater Management

An on-site storm drainage system would be installed that would collect and convey runoff and ultimately discharge it to the City of Dublin's municipal storm drainage system which drains into a Regional Water Quality Pond. Drainage for the project site would be designed to maintain the existing watershed drainage pattern to the extent feasible and avoid any impact to downstream watersheds by reducing the post development runoff for the site to the predevelopment condition.

3.6.5 Dry Utilities

Electricity in City of Dublin is provided by East Bay Community Energy (EBCE) and is conveyed to customers through Pacific Gas and Electric's (PG&E) existing infrastructure. PG&E would serve the project with electricity and natural gas, as allowed. An all-electric new construction will be included with the 2022 California Building Code update. Additionally, portions of the project would include the use of solar power/photovoltaics. The project would also incorporate electric vehicle (EV) charging stations for the commercial areas and multi-family buildings, as applicable.

3.7 Project Construction and Phasing

Project construction activities would include site preparation, grading, paving, building construction, and architectural coating. As shown in [Figure 3-8: Project Phasing Plan](#), the project would be completed in two phases over an estimated construction period of approximately four years. The first phase would include the commercial area of PA-2, followed by development of the residential portion of PA-2, PA-1, PA-3 and PA-4.

The project would utilize an average of 125 workers a year and would generate approximately 458 daily trips, based on 3.05 daily trips per worker, with a 20 percent increase to account for material deliveries, and other trips not directly related to site workers.

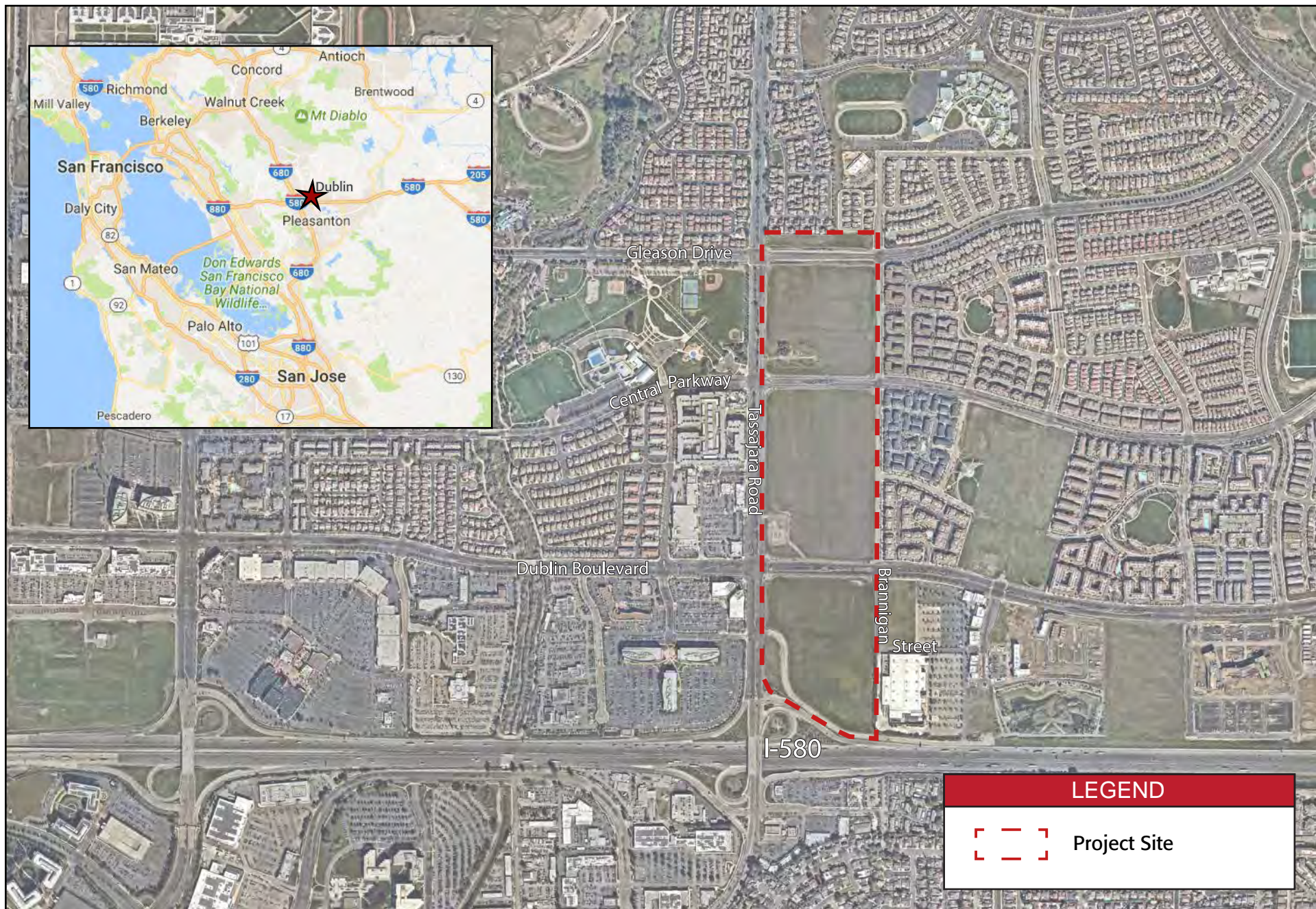
3.8 References

City of Dublin. *Bicycle and Pedestrian Master Plan*, adopted October 7, 2014.

City of Dublin. *City of Dublin General Plan*, 1985, as amended 2022.

City of Dublin. *City of Dublin Municipal Code*.

City of Dublin. *Eastern Dublin Specific Plan*, 1994, updated 2022.



Source: Kimley-Horn, 2022

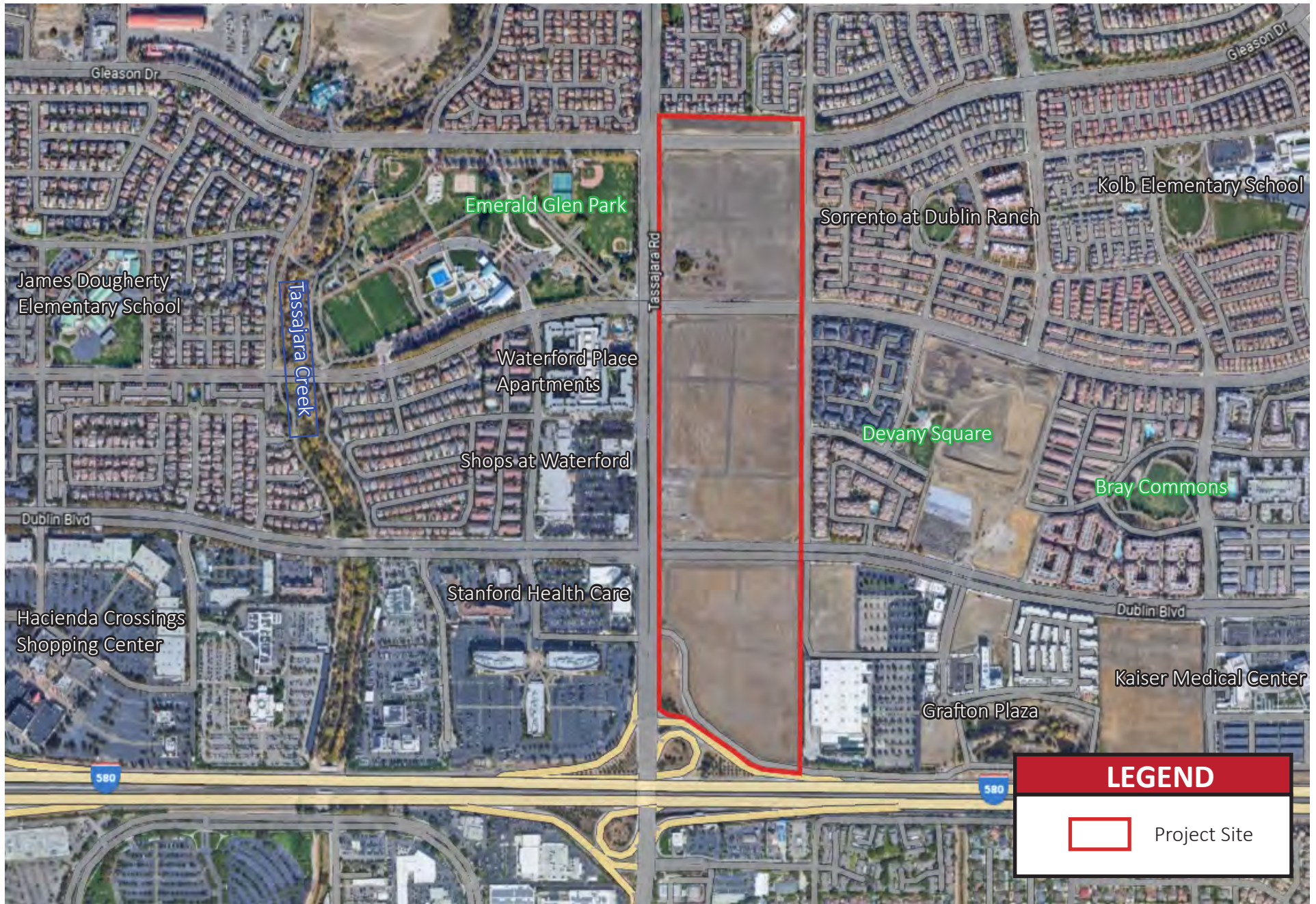
Figure 3-1: Project Location

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Not to scale

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Source: Kimley-Horn, 2022

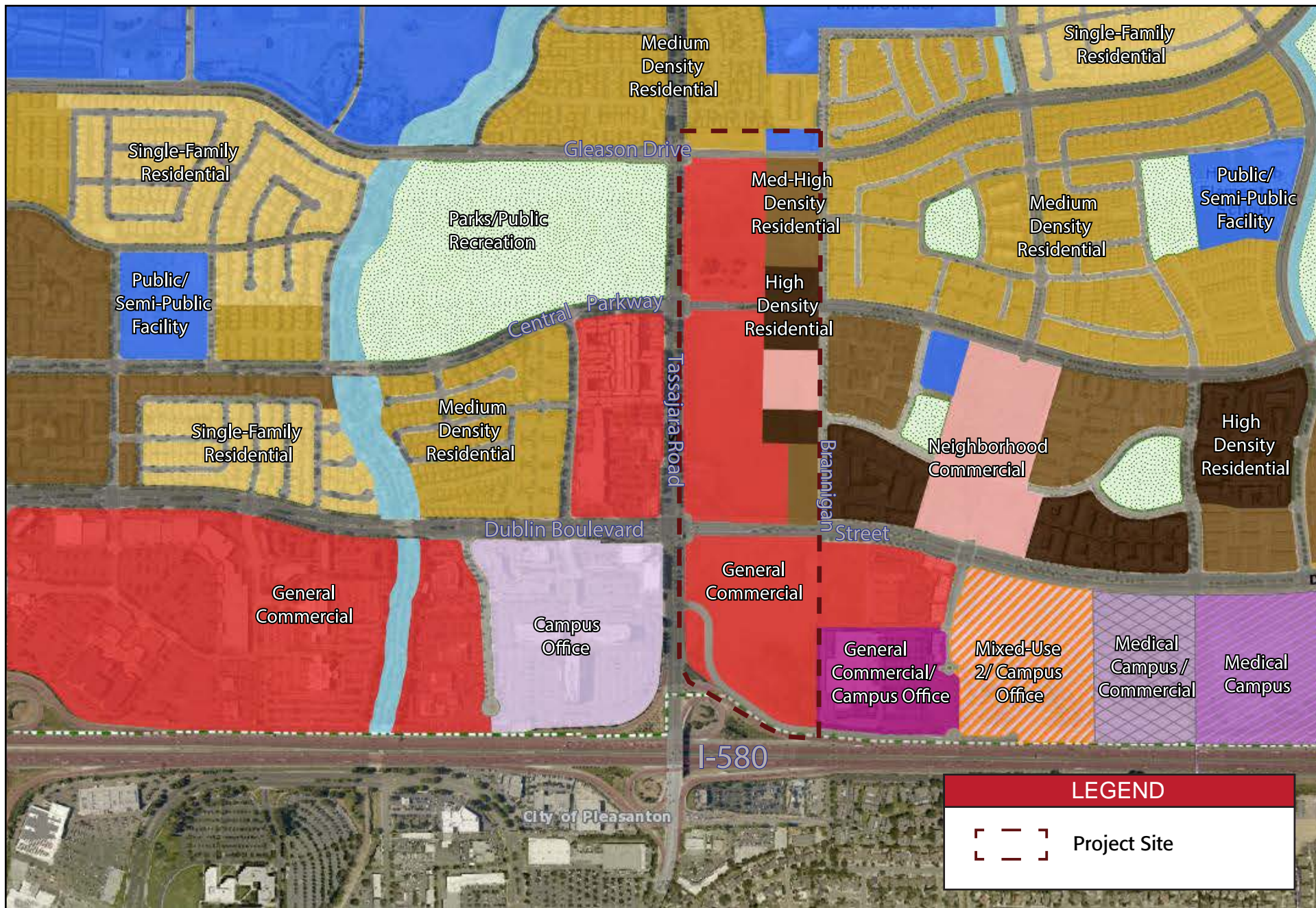
Figure 3-2: Surrounding Land Uses

SCS Dublin Project
Environmental Impact Report



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Source: Kimley-Horn, 2022

Figure 3-3: Existing General Plan Land Use Designations

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Source: Kimley-Horn, 2022

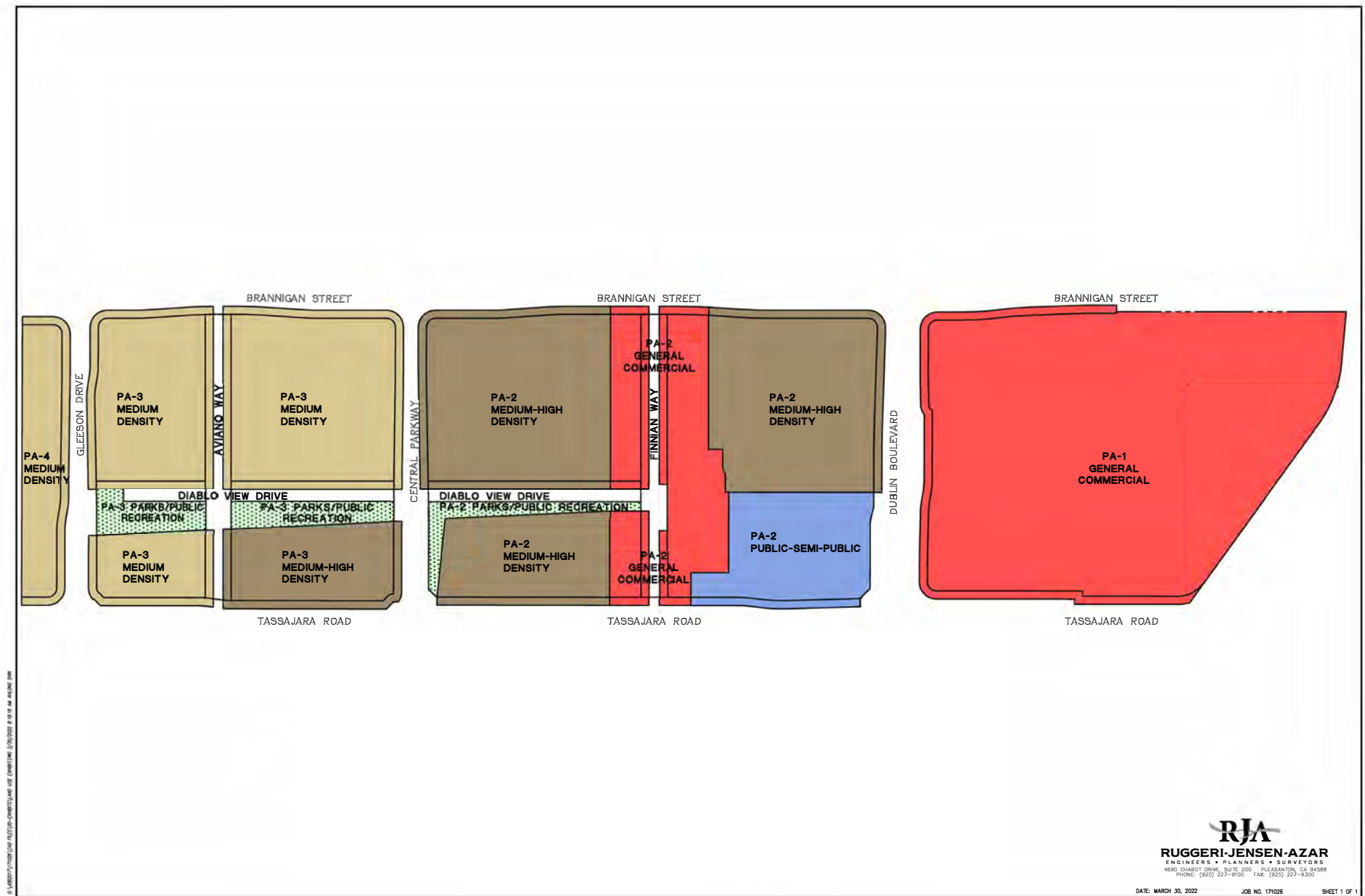
Figure 3-4: Existing Zoning

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Source: RJA, 2022

Figure 3-5: Proposed General Plan Land Use Designations

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Source: Project Application, 2022

Figure 3-6: Illustrative Site Plan

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Source: Project Application, 2022

Figure 3-7a: Project Renderings

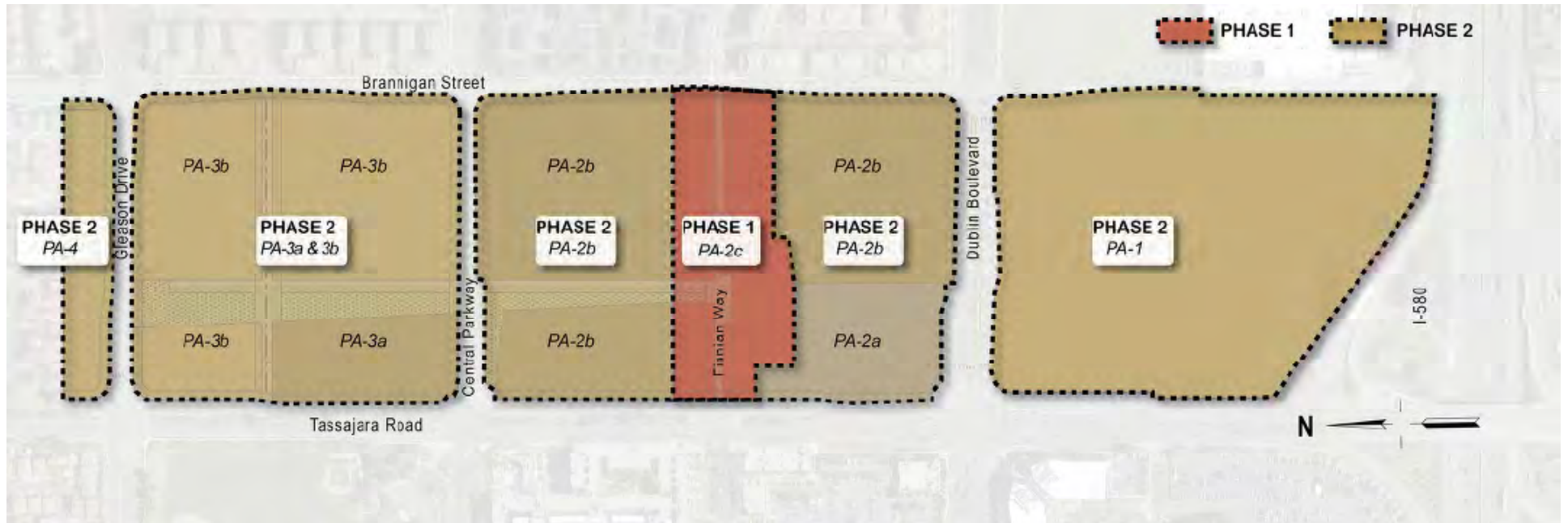
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Source: Project Application, 2022

Figure 3-7b: Project Renderings

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Source: Project Application, 2022

Figure 3-8: Project Phasing Plan

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4 Introduction to Environmental Analysis

4.1 Environmental Assessment Methodology

The environmental resource analysis below (by chapter) describes the potential environmental impacts associated with the construction and operation of the project. This analysis considers the comments submitted during the scoping process (see [Appendix A: Notice of Preparation and Comment Letters](#)). References to data and/or technical studies are listed at the end of each chapter.

4.1.1 Methodology

The methodology used to determine impacts consists of three key components, summarized below.

Environmental Setting. The environmental setting describes existing conditions in the project site that may change as a result of the construction and operation of the project. Pursuant to CEQA Guidelines (Section 15125(a)), the environmental setting used for the impact analysis reflects the conditions at the time of the issuance of the Notice of Preparation.

Applicable Regulations, Plans, and Standards. Each issue area includes a description of current public policies, regulations, programs, and standards that apply to the project.

Environmental Impacts and Mitigation. This section evaluates the environmental impacts (including cumulative impacts) of the project based on predetermined, specific significance criteria. In determining the significance of impacts, the assessment considers the ability of existing regulations and other public agency requirements to reduce impacts. If an adverse impact is potentially significant despite existing regulations and requirements, mitigation measures are proposed to reduce or avoid the impact, where feasible. Mitigation measures are required only for significant adverse impacts. Once impacts and mitigation measures, as applicable, are presented, the “level of significance after mitigation” is determined.

4.1.2 Impact Significance

While the criteria for determining whether an impact is significant are unique to each issue area, a uniform classification of impacts is used in this EIR. Each impact is categorized based on the following definitions:

Class I: Significant impact; cannot be mitigated to a level that is less than significant

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures

Class III: Adverse impact; but less than significant, so mitigation is not normally recommended

Class IV: Beneficial impact; mitigation is not required

No impact.

4.1.3 Mitigation Measures

Where potentially significant impacts are identified, mitigation measures are identified. Each mitigation measure defines the specific requirements to reduce impacts and defines the timeframe, responsible party, and the mitigation monitoring requirement, if applicable.

Note that due to the location of the proposed uses on the project site, some mitigation measures apply only to one portion (commercial development, mixed use or residential development) of the project. Each mitigation measure indicates whether it applies to specific planning areas, the commercial development, mixed use, residential development or all components of the project.

4.1.4 Mitigation Monitoring

Public Resources Code Section 21081.6 establishes two distinct requirements for agencies involved in the CEQA process. Subdivisions (a) and (b) of the section relate to mitigation monitoring and reporting, and the obligation to mitigate significant effects where possible. Pursuant to subdivision (a), whenever a public agency completes an EIR and makes a finding pursuant to Section 21081(a) of the Public Resources Code taking responsibility for mitigation identified in the EIR, the agency must adopt a program of monitoring or reporting which will ensure that mitigation measures are complied with during implementation of the project.

4.2 Effects Not Found to Be Significant

Pursuant to the CEQA Guidelines Section 15128, “An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were, therefore, not discussed in detail in the EIR.” This chapter of the Draft EIR describes the resource areas that were found not to pose any potentially significant effects.

Based on the scope of the project, comment letters in response to the NOP, site visits, review of project applicant materials and technical reports, and additional background research on the construction and operational features of the project, the following resource topics were found to not have impacts that would be considered potentially significant. These topics, therefore, are not subject to further detailed analysis in the EIR.

4.2.1 Agricultural Resources

The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the State Farmland Mapping and Monitoring Program (FMMP). It is designated as Grazing Land, land which the existing vegetation is suited to livestock grazing. No Williamson Act contract applies to the project site. The project site does not currently comprise agricultural or forestry uses, and it is designated for a mix of residential and commercial uses

pursuant to the General Plan and EDSP. There would be no impact to agricultural and forestry resources.

4.2.2 Mineral Resources

The project site lies within Mineral Resource Zone 1 (MRZ-1), as mapped by the California Department of Mines and Geology (DMG). MRZ-1 zones are “areas where adequate information indicates that no significant mineral despoils are present, or where it is judged that little likelihood exists for their presence.” The project site is not a mineral resource recovery site and, therefore, there would be no impact to mineral resources.

4.2.3 Wildfire

The project site is located in an urban setting and is not susceptible to wildfire risk. The site is not located in a State Responsibility Area or located on lands classified as a very high fire hazard severity zone. For these reasons, there would be no impact with respect to wildfire risk.

4.3 Cumulative Impacts

4.3.1 CEQA Requirements

Under the CEQA Guidelines, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the environmental impact report (“EIR”) together with other projects causing related impacts” (14 CCR §15130(a)(1)). CEQA PRC §21000 et seq., an EIR must discuss cumulative impacts if the incremental effect of a project, combined with the effects of other projects is “cumulatively considerable” (14 CCR §15130(a)). Such incremental effects are to be “viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects” (14 CCR §15164(b)(1)). Together, these projects compose the cumulative scenario which forms the basis of the cumulative impact analysis.

Cumulative Impact Analysis Methodology

The area within which a cumulative effect can occur varies by resource. For example, air quality impacts generally affect a large area (such as the regional Air Basin), while traffic impacts are typically more localized. For this reason, the geographic scope for the analysis of cumulative impacts is identified for each resource area in the following chapters.

The analysis of cumulative effects considers a number of variables, including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project site and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects, but not beyond the scope of the direct and indirect effects of the project.

In addition, future projects that comprise the cumulative condition each have their own implementation schedule, which may or may not coincide or overlap with the project’s

schedule. This is a consideration for short-term impacts from the project. However, to be conservative, the cumulative analysis assumes that all projects in the cumulative scenario are built and operating during the operating lifetime of the project.

4.4 References

CA Department of Conservation. 2018. Farmland Mapping and Monitoring Program. Available at <http://www.conservation.ca.gov/dlrp/fmmp>. Accessed April 13, 2022.

CALFIRE (California Department of Forestry & Fire Protection). 2007. Fire Hazard Severity Zones on SRA. Available at <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>. Accessed April 14, 2022.

CALFIRE (California Department of Forestry & Fire Protection). 2008. Very High Fire Hazard Severity Zones in LRA. Available at <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>. Accessed April 14, 2022.

CA Department of Mines and Geology. 2018. California Geological Survey. Available at <http://www.conservation.ca.gov/cgs>. Accessed April 13, 2022.

5 Aesthetics

5.1 Introduction

This chapter describes effects on aesthetics that would be caused by implementation of the project. Information used to prepare this chapter came from the following resources:

- City of Dublin, *General Plan*, 1985 as amended 2022
- City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022
- City of Dublin, *Eastern Dublin Scenic Corridor Standards and Guidelines*, 1996
- Project application and related materials
- Site Photos

The study area, also known as the viewshed, is defined as the area from which the project would be seen both on and immediately surrounding the project site. The current condition and quality of aesthetic resources within the study area were used as the baseline against which to compare potential aesthetic impacts of the project.

The approach used to evaluate the existing aesthetics conditions consisted of the identification of applicable key viewpoints (KPVs), reviewing the project application including site plans and elevations, development standards, etc.

5.2 Scoping Issues Addressed

During the public comment scoping period for the project, no comments regarding aesthetics were raised.

5.3 Environmental Setting

This section presents information on aesthetic conditions in the study area. The current condition and quality of aesthetic resources was used as the baseline against which to compare potential impacts of the project.

5.3.1 Regional Landscape

The City of Dublin is located on 14.59 square miles in Eastern Alameda County within the Tri-Valley Region. The City is approximately 35 miles east of San Francisco and is generally bound by the City of San Ramon to the north, the City of Livermore to the east, Interstate 580 and the City of Pleasanton to the south, and the City of Castro Valley and the East Bay Hills to the west.

5.3.2 Project Site

The project site is located approximately four miles east of downtown Dublin, within the southeastern portion of the City. The property is bordered by single-family residences to the

north, multi-family residential and commercial uses to the east, Interstate 580 to the south, and Emerald Glen Park along with commercial, residential and campus office uses to the west along Tassajara Road.

The site is vacant, with the exception of occasional seasonal uses, and was historically utilized for agricultural purposes. The terrain is generally flat with a slight slope from the north to the south. The majority of vegetation found on-site is low lying native and nonnative grasses that are turned periodically for the purposes of weed abatement. A small group of trees and shrubs is located near the corner of Tassajara Road and Central Parkway. No grading for development purposes has occurred to date.

5.3.3 Scenic Routes

Interstate 580 was designated as a Scenic Route by the County of Alameda in 1966 (the City of Dublin was incorporated in 1982 and recognized this scenic route designation). Tassajara Road is designated as a scenic corridor within Alameda County.

The EDSP maintains that “it is critical that views of major ridgelines be maintained from the scenic corridors.” The City of Dublin General Plan Circulation and Scenic Highways Element states that scenic routes “are the places from which people traveling through Dublin gain their impression of the City; therefore, it is important that the quality of views be protected.”

5.3.4 Light and Glare

There are no existing sources of light and glare on the project site. Adjacent sources of light and glare include streetlights on the adjacent roadways and nearby commercial and residential land uses.

5.4 Applicable Regulations, Plans, and Standards

5.4.1 Federal

None applicable.

5.5 State

CA Scenic Highway Program

In 1963, the California Legislature established the State’s Scenic Highway Program, which is intended to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq.

The State Scenic Highways program, established by the Streets and Highways Code, is administered by the California Department of Transportation (Caltrans). The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such.

A scenic corridor is the land generally adjacent to and visible from the scenic highway and is identified using a motorist's line of vision. The corridor protection program seeks to encourage quality development that does not degrade the scenic value of the corridor. Minimum requirements for scenic corridor protection include:

- Regulation of land use and density of development
- Detailed land and site planning
- Control of outdoor advertising (including a ban on billboards)
- Careful attention to and control of earthmoving and landscaping
- Careful attention to design and appearance of structures and equipment

5.5.1 Local

City of Dublin General Plan

The City of Dublin's General Plan contains the following goals, policies and implementation measures associated with aesthetic resources that are relevant to the project:

Goal 10.5.2: Promote a positive regional identity of the City.

Policy 10.5.3.A: Incorporate distinctive design features along regional corridors that reinforce a positive image of Dublin. Both within the right-of-way and on adjacent private development, utilize features such as gateway elements, street trees, median planting, special lighting, separated and ample sidewalks, crosswalks, seating, special signs, street names, landscape, decorative paving patterns, and public art. Consider undergrounding utilities along these roadways.

Policy 10.5.3.B: Maintain views through development to distant vistas (i.e. foothills) and view corridors along regional corridors, wherever feasible.

Policy 10.5.3.C: Incorporate visual screening techniques such as berms, dense and/or fast-growing landscaping, and appropriately designed fencing where feasible, to ensure that visually challenging features, such as parking lots, loading docks, storage areas, etc. are visually attractive as seen from regional corridors.

Policy 10.5.3.D: Provide landscaping and articulated design to soften the visual appearance of existing and new walls and fences that are adjacent to regional corridors, wherever feasible.

Policy 10.5.3.E: Encourage attractive and high-quality landscaping along the edge of the freeways and development surrounding on- and off-ramps to provide softer and more attractive views both to and from the freeways. Landscaping on private property should complement the buildings and overall site design.

Goal 10.6.2: Create a Sense of Arrival at gateways to the City.

Policy 10.6.3.A: Mark gateways with City identification (i.e. signage) and include enhanced landscaping and street improvements to highlight Dublin's identity, consistent with the City's Streetscape Master Plan, where feasible (reference: Streetscape Master Plan).

Policy 10.6.3.B: Incorporate dramatic and imaginative landscaping, public art, water features, or other design features when reconstructing streets and/or sidewalks at key gateways into the City, where feasible (reference: Public Art Master Plan).

Policy 10.6.3.C: Encourage signature building architecture at gateways that are oriented toward the gateway to create a sense of place.

Implementation Measure 10.6.4.A: Implement the Streetscape Master Plan.

Implementation Measure 10.6.4.B: Review development adjacent to gateways through the Planned Development Regulations and the Site Development Review Permit process.

Goal 10.7.2: Ensure quality and compatible design of the built form.

Policy 10.7.3.1.A: Encourage diverse, high quality, attractive, and architecturally appealing buildings that create distinctive visual reference points, enrich the appearance of functional gathering spaces, and convey an excellence in architecture, workmanship, quality, and durability in building materials.

Policy 10.7.3.1.B: Encourage buildings with varied massing, heights, articulation techniques, and architectural and signage treatments to create visual interest and ensure compatibility with adjacent uses, in commercial, office, industrial, and mixed-use areas.

Policy 10.7.3.1.C: Ensure that building height, scale and design are compatible with the character of the surrounding natural and built environment, and are varied in their massing, scale and articulation.

Policy 10.7.3.1.D: Encourage a variety of site and building designs that are compatible and consistent with surrounding development, especially where larger scale development is adjacent to smaller scale and/or more sensitive land uses (i.e. residential, schools, and churches) to the greatest extent feasible.

Policy 10.7.3.1.E: Avoid the use of long, continuous, straight (building) walls along roadways by designing appropriate articulation, massing, and architectural features.

Policy 10.7.3.1.F: Create distinctive neighborhoods that exemplify high-quality and varied design while reinforcing Dublin as one integrated community, in residential areas.

Policy 10.7.3.1.G: Encourage the diversity of garage orientation and setbacks, architectural styles, building materials, color and rooflines, and other design features, on all sides of all buildings, in residential areas.

Policy 10.7.3.1.H: Orient buildings toward major thoroughfares, sidewalks, pedestrian pathways, and gathering spaces, and incorporate clear and identifiable entries where feasible, in campus office areas.

Policy 10.7.3.1.I: Cluster and connect buildings through a series of pedestrian pathways designed to work with each other to form a unified design character and create larger functional spaces, in campus office and commercial areas.

Policy 10.7.3.1.K: Minimize the visual impacts of service/loading areas, storage areas, trash enclosures, and ground mounted mechanical equipment. When feasible, these elements should be located behind or to the sides of buildings and screened from views through a combination of walls/fencing, and/or landscaping.

Policy 10.7.3.1.L: Minimize the visual impacts of roof mounted mechanical equipment. When feasible, such elements should be consolidated and housed in architecturally articulated enclosures.

Policy 10.7.3.2.A: Utilize more formal landscaping treatments in more densely developed (urban) areas and utilize more natural landscaping treatments in less dense (suburban) areas, as appropriate.

Policy 10.7.3.2.B: Achieve neighborhood identities by applying streetscape and landscape design, entry treatments, signage, and architectural detailing standards, in residential areas (reference: Streetscape Master Plan).

Policy 10.7.3.2.C: Incorporate setbacks and landscaped buffers for development along collector and arterial roadways to minimize the impacts from roadway noise, where appropriate.

Policy 10.7.3.2.D: Ensure that landscaping along and adjacent to the public realm is well maintained and retains a natural appearance.

Policy 10.7.3.2.E: Encourage distinctive landscaping and signage that is aesthetically appealing from the public realm (reference: Streetscape Master Plan).

Policy 10.7.3.2.F: Encourage the use of landscaping on walls to soften and screen their visual appearance (reference: Streetscape Master Plan).

Policy 10.7.3.2.G: Increase the width of existing narrow parkway strips when the opportunity arises and encourage all new development and redevelopment projects to provide appropriately sized landscaped parkway strips (reference: Streetscape Master Plan).

Policy 10.7.3.2.H: Preserve mature trees and vegetation, with special consideration given to the protection of groups of trees and associated undergrowth and specimen trees (reference: Heritage Tree Ordinance).

Policy 10.7.3.2.I: Preserve views of creeks, hillsides, skylines, or other natural or man-made landmarks during site planning of new developments, whenever feasible.

Policy 10.7.3.3.A: Encourage gathering spaces and amenities such as mini plazas, courtyards, benches, seating, shade, trash receptacles, and water fountains, in commercial and office areas.

Policy 10.7.3.3.B: Design attractive gathering spaces with pedestrian amenities such as landscaping, benches, shade structures, fountains, public art, and attractive lighting.

Policy 10.7.3.3.C: Encourage design treatments that enhance the attractiveness of the streetscape, public spaces, landscaped areas, and open space.

Policy 10.7.3.4.A: Ensure that perimeter areas incorporate appropriate planting, lighting, and signage.

Policy 10.7.3.4.B: Ensure that signs are constructed of high quality materials, are compatible with their surroundings, and make a positive visual contribution to the character of the community.

Policy 10.7.3.4.D: Incorporate public art where feasible (reference: Public Art Master Plan).

Policy 10.7.3.4.E: Design and locate outdoor lighting around buildings, in parking lots, and along streets that minimize the effects of glare on adjacent properties, particularly in residential areas.

Policy 10.7.3.5.A: Provide convenient but not visually dominating parking that incorporates extensive landscaping to provide shade, promote wayfinding, visually soften views from the street and surrounding properties, and reduce the heat island effect (generally characterized with large expanses of paved and under-landscaped surfaces).

Policy 10.7.3.5.B: Buffer and screen large expanses of parking areas from the street, where practical.

Policy 10.7.3.5.C: Encourage the use of integrated circulation and parking facilities that are shared among surrounding properties.

Policy 10.8.3.A: Provide safe, visually pleasing, and comfortable pedestrian and bicycle connections between destinations within a project area by providing wide multi-use paths, generous sidewalks, and dedicated bicycle lanes on Class I and II Collector and Arterial streets.

Policy 10.8.3.B: Provide clear, identifiable, and ample pedestrian and bicycle pathways that connect sidewalks, parking areas, building entrances, trails and other site features by using

wayfinding techniques such as signage, landscaping, hardscape, and prominent building entrances, where feasible (reference: Dublin Bicycle and Pedestrian Master Plan).

Policy 10.8.3.C: Provide a continuous and ample network of pedestrian and bicycle routes within a project area and logical connections to the exterior of the project area and thereby create safe routes of travel to transit facilities, public gathering spaces, trails, parks, community centers, schools, City villages, gateways and entries (reference: Dublin Bicycle and Pedestrian Master Plan).

Eastern Dublin Specific Plan

The project site is located within the following Planning Subareas of the EDSP:

- 1) **Town Center – Commercial**, along Tassajara Road south of Gleason Drive and north of Dublin Boulevard. This subarea was envisioned the commercial core for eastern Dublin and is intended to be a high density, pedestrian-oriented commercial, civic, and entertainment center for Dublin and the surrounding communities.
- 2) **Town Center – Residential**, along Brannigan Street south of Gleason Drive and north of Dublin Boulevard. This subarea was envisioned for a large community park and open space area on the eastern portion and residential on the western side.
- 3) **Tassajara Gateway**, area south of Dublin Boulevard. This area was envisioned for high-quality commercial uses that establishes a positive impression on the thousands of travelers travelling along Dublin Boulevard and Tassajara Road.
- 4) **Foothill Residential** for the small area of the project on the north side of Gleason Drive. This area was envisioned for predominantly single-family residential in the lower density range.

The EDSP contains the following goal, policies and program associated with aesthetic resources as it relates to the project:

Visual Resources - General

Goal: To establish a visually distinctive community which preserves the character of the natural landscape by protecting key visual elements and maintaining views from major travel corridors and public spaces.

Policy 6-28: Preserve the natural open beauty of the hills and other important visual resources, such as creeks and major stands of vegetation.

Policy 6-30: Structures built near designated scenic corridors shall be located so that views of the back- drop ridge (identified in Figure 6.3 as “Visually Sensitive Ridglands - no development”) are generally maintained when viewed from the scenic corridors.

Policy 6-31: High quality design and visual character will be required for all development visible from designated scenic corridors.

Tassajara Road Scenic Corridor

Policy 6-29: Development is not permitted on the main ridgeline that borders the planning area to the north and east, but may be permitted on the foreground hills and ridgelines. Minor interruptions of views of the main ridgeline by individual building masses may be permissible in limited circumstances where all other remedies have been exhausted.

Policy 6-30: Structures built near designated scenic corridors shall be located so that views of the back- drop ridge (identified in Figure 6.3 as "visually sensitive ridgelines - no development") are generally maintained when viewed from the scenic corridors.

Policy 6-31: High quality design and visual character will be required for all development visible from designated scenic corridors.

Program 6R: The City should require projects with potential impacts on scenic corridors to submit detailed visual analysis with development project applications. Applicants will be required to submit graphic simulations and/or sections drawn from affected travel corridors through the parcel in question, representing, typical views of the parcel from these scenic routes. The graphic depiction of the location and massing of the structure and associated landscaping can then be used to adjust the project design to minimize the visual impact.

Eastern Dublin Scenic Corridor Policies and Standards

The Eastern Dublin Scenic Corridor Policies and Standards document was adopted by the City Council in 1996 as a means of implementing the requirements of the Eastern Dublin Specific Plan. The Scenic Corridor policies establish standards for projects within the scenic corridor viewshed. Along the Interstate 580 corridor, the document identified three critical viewpoints of Dublin's "Visually Sensitive Ridgelines," including: Viewpoint 1 from Interstate 580 looking north up Tassajara Creek, Viewpoint 2 looking northeast to the ridgelines from the Tassajara Road Interstate 580 overpass, and Viewpoint 3 looking north and northeast from the Fallon Road overpass.

Standard 1.1 states that from these three designated viewpoints, development shall maintain generally uninterrupted views to significant natural features. The viewpoint that is material to this analysis is Viewpoint 2, where the standard is to have structures that do not extend above the horizon of the Visually Sensitive Ridgelines for more than 25 percent of the total horizon line. The total horizon line is further defined as the limits of the Visually Sensitive Ridgelines as seen from Viewpoint 2 (as shown in Figure 7 of the Scenic Corridor Policies and Standards document).

Standard 1.2 states that structures adjacent to a scenic corridor, generally within 700 feet of the scenic corridor, should be allowed to obstruct views of the Visually Sensitive Ridgelines from Interstate 580 for not more than 50 percent of the developed frontages. Views may be maintained by balancing building heights and setbacks so as to allow views over the buildings, by clustering buildings to allow views through, or by siting parking to preserve views to the hills.

5.6 Environmental Impacts and Mitigation Measures

5.6.1 Significance Criteria

The following significance criteria for aesthetics were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address Lead Agency requirements and the full range of potential impacts related to this project.

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria.

- Cause a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Also, given consideration are any General Plan goals, policies, or designations that are designed to reduce aesthetic impacts. Conflicts with such laws, ordinances, regulations, and standards can constitute evidence of a significant aesthetic impact. Lastly, a significant aesthetic impact could occur if the project's incremental aesthetic impact would be cumulatively considerable.

Significance Classifications

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

Impact Assessment Methodology

To determine potential impacts, the impact significance criteria identified above were applied to construction and operation of the project. Impacts are identified as being either short-term or long-term in nature. They are numbered under each impact significance criterion, as are applicable mitigation measures.

An adverse aesthetic (visual) impact occurs within public view when: (1) an action significantly changes existing features of the physical environment so that they no longer appear to be characteristic of the subject locality or region; (2) an action introduces new features to the physical environment that are significantly uncharacteristic of the region and/or locale; or (3) aesthetic features of the landscape become significantly less visible (i.e., partially or totally blocked from view) or are removed. Changes that seem uncharacteristic are those that appear out of place, discordant, or distracting. The degree of the aesthetic impact depends upon how noticeable the adverse change may be. The noticeability of an adverse aesthetic impact is a function of project features, context, and viewing conditions (e.g., angle of view, distance, primary viewing directions, and duration of view).

The specific factors considered in determining impacts on aesthetics included the following factors:

1. An understanding of the overall visual sensitivity of the project site;
2. The resulting contrast of the proposed facilities or activities with existing landscape characteristics;
3. The degree to which project components would dominate the view of the observer;
4. The extent to which project features or activities would block views of higher value landscape features; and
5. An understanding of the overall visual change that would occur in the landscape as a result of the project.

The components contributing to the assessment of overall visual change are described below.

Visual Contrast

Visual contrast concerns the degree to which a project's visual characteristics or elements (e.g., form, line, color, and texture) differ from the same visual elements in the existing landscape. The degree of contrast can range from low to high. A landscape with forms, lines, colors, and textures similar to those of the project is more visually absorbent; that is, it is more capable of accepting those project characteristics than a landscape in which those elements are absent. Generally, visual absorption is inversely proportional to visual contrast. Visual contrast ranges from low to high. Contrast can also be exacerbated by visible glare from project components.

Dominance

Dominance is a measure of the proportion of the total field of view occupied by the feature, a feature's apparent size relative to other visible landscape features, and the conspicuousness of the feature due to its location in the view.

A feature's level of dominance tends to be lower in a panoramic setting compared to a setting with confined sightlines with a focus on the feature itself. A feature's level of dominance is higher if it is near the center of the view, elevated relative to the viewer, or has the sky as a

backdrop. As the distance between a viewer and a feature increases, its apparent size decreases, and consequently its dominance decreases. The level of dominance ranges from subordinate to dominant.

View Blockage

The extent to which any previously visible landscape features are blocked from view constitutes view blockage or impairment. The view is also impaired when the continuity of the view is interrupted. When considering a project's features, higher quality landscape features can be blocked by lower quality project features, thus, resulting in adverse aesthetic impacts. The degree of view blockage can range from none to high. Public views, not private, are considered under CEQA.

Visual Change

Visual change is derived from the three components described above—contrast, dominance, and view blockage—and is a concluding assessment as to the degree of change that would be caused by a project. The degree of visual change can range from low to high.

5.6.2 Summary of No and/or Beneficial Impacts

There are no “no” impacts nor “beneficial” impacts.

5.6.3 Impacts of the Proposed Project

Impact AES-1: Adversely effect a scenic vista (Class III).

The General Plan describes a design vision which is the basis for the City's goals and policies related to community design. The design vision identifies the need to utilize regional corridors to promote the positive regional identity of the City through attractive development, unique landscaping, and preservation of views to rolling hillsides and other prominent natural features. The General Plan identifies Tassajara Road as a regional corridor and, therefore, per Policy 10.5.3.B, developments must maintain views through the development to distant vistas wherever feasible.

The General Plan recognizes Tassajara Road as an Alameda County designated scenic route. The EDSP also recognizes Tassajara Road as a scenic corridor and asserts that views of major ridgelands be maintained from scenic corridors. The EDSP goals and policies, discussed above, encourage development that maintains views from scenic corridors to Visually Sensitive Ridgelands, as shown in EDSP Figure 6.3: Environmental Constraints.

Furthermore, the Eastern Dublin Scenic Corridor Policies and Standards identifies the view looking northeast to the ridgelands from the Tassajara Road overpass as a designated viewpoint within the project area. Per the Eastern Dublin Scenic Corridor Policies and Standards, implementation of developments shall maintain generally uninterrupted views and have structures that do not extend above the horizon of the Visually Sensitive Ridgelands for more

than 25 percent of the total horizon line (the limits of the Visually Sensitive Ridgelines as seen from Viewpoint 2).

The Visually Sensitive Ridgelines identified in EDSP Figure 6.3 are located approximately 2.5 miles northeast of the project site. Figure 7 of the Eastern Dublin Scenic Corridor Policies and Standards provides a view cone that gives the estimated maximum heights for developments at set distances from Viewpoint 2 that would avoid obstructing views of the Visually Sensitive Ridgelines. This view cone encompasses a significant portion of the project site south of Dublin Boulevard.

The tallest feature proposed for this portion of the project site is an indoor/outdoor recreation facility that is anticipated to function as a Topgolf entertainment driving range. Topgolf facilities typically consist of parking, a three-level building enclosed on three sides with the fourth side open to serve as hitting bays, and an outdoor driving range outfield extending from the open side.

As shown in **Figure 5-1: Rendering of Topgolf Building Massing From Viewpoint 2**, the building is long and relatively narrow, with a maximum height of 55 feet. It is oriented nearly perpendicular to the distant ridgeline, thereby reducing its visual prominence when seen from Viewpoint 2 as identified in Figure 7 of the Eastern Dublin Scenic Corridor Policies and Standards. The majority of the building would be located within the 60-foot height zone as identified in Figure 7. The building's height and orientation would be consistent with the Eastern Dublin Scenic Corridor Policies and Standards avoid through avoidance of obstructing views of the Visually Sensitive Ridgelines. The outdoor driving range would be enclosed by netting that is 93 percent transparent and supported by poles up to 190 feet tall [OBJ]. The proposed nets and support poles would be substantially taller than any surrounding structures and extend above the maximum height limit. However, they would not obstruct the view as defined in Figure 7 given their semi-transparent appearance, and the fact that the poles and nets would not extend above the horizon of the Visually Sensitive Ridgelines for more than 25 percent of the total horizon line.

The area south of Dublin Boulevard also includes the potential to develop up to two hotels with a total of 140 rooms. The hotel building(s) would be limited to a maximum height of 74-feet and would be located at the corner of Dublin Boulevard and Brannigan Street, outside of the 60-foot maximum height limit.

Furthermore, the project applicant will be required to comply with the requirements of Program 6R of the EDSP by submitting a detailed visual analysis of the Tassajara Road Scenic Corridor for the project as part of the Site Development Review Permit process. Review of this visual analysis will also ensure compliance with EDSP Policies 6-30 and 6-31 and Eastern Dublin Scenic Corridor Policies and Standards 1.1 and 1.2 which would prevent impacts to Visually Sensitive Ridgelines.

Based on the above analysis, and the requirement for compliance with City standards and policies, the project would result in a less-than-significant impact to views of a scenic vista. Impacts would be Class III, less than significant with no mitigation required.

Impact AES-2: Substantially damage scenic resources within a State scenic highway (Class III).

The southern boundary of the project site is immediately adjacent to and within view of I-580 which is an Eligible State Scenic Highway. Viewpoint 2 on the Tassajara Road overpass over I-580 overlooks the southern portion of the project site from I-580.

As described in **Impact AES-1** above, views of the Visually Sensitive Ridgeland from Viewpoint 2 and I-580 identified in the Eastern Dublin Scenic Corridor would not be significantly impacted by the proposed project, including the proposed Topgolf sports recreation facility. Furthermore, as described in **Impact AES-1** above, the project will be required to comply with the requirements of the EDSP and the Eastern Dublin Scenic Corridor Policies and Standards by submitting a visual analysis as part of the Site Development Review Permit process.

Therefore, the project would result in a less-than-significant impact to scenic resources within a State scenic highway. Impacts would be Class III, less than significant with no mitigation required.

Impact AES-3: Substantially alter the visual character of the project site and surrounding area (Class III).

The project consists of both commercial and residential development that would be constructed in two phases (see **Figure 3-8: Project Phasing Plan**). The first phase would include development of the commercial area of PA-2, followed by development of residential area of PA-2, 1, PA-3 and PA-4 in the second phase. Project development would include plazas, linear parks, paseos, and gardens located throughout each of the planning areas along with gathering places for community events.

The project would complete pedestrian walkways and plantings along existing City streets and develop multi-use paths, paseos and pedestrian walkways to provide connections between the residential, commercial and open spaces throughout the site. Varied but complementary plantings and hardscape features would project a modern agrarian aesthetic. The project would utilize setbacks and landscaped buffers for screening throughout the site. Walls would be interior to the project with the exception of the continuation of an existing wall located within PA-4. The continuation of the existing wall in this specific portion of the project would allow for continuity with the existing setbacks, landscaping, and residential lot configuration adjacent to PA-4 along Gleason Avenue.

The City's General Plan identifies several key entrances to the City, including the intersection of Dublin Boulevard and Tassajara Road, as gateways. General Plan Policies 10.6.3.A, 10.6.3.B and 10.6.3.C describe the use of landscaping, architectural features, signage, and consistency with

the City's Streetscape Master Plan as measures that would support General Plan Goal 10.6.2 and assist in creating a sense of arrival to the City.

The project would require a General Plan and Specific Plan Amendment to modify the land use designations to accommodate the proposed development. The subject site is currently designated with a combination of General Commercial, Neighborhood Commercial, Medium, Medium/High, and High-Density Residential land uses. In addition, a small portion of the site north of Gleason Drive is designated for Public/Semi-Public uses. The project implements the City's new vision for the SCS Property based on the Preferred Plan approved by City Council in February 2022, which includes similar uses as the current land use designations, albeit at different intensities and areas. Accordingly, the project is located in an area with compatible surrounding uses, including commercial, residential, campus office, and parks/public recreation uses.

Per Chapter 8.84 of the Dublin Municipal Code, the project would be required to have a Master Sign Program. Adherence to the Master Sign Program would ensure that project signage would be compatible with the style and character of project and surrounding development and are well related to each other.

Upon EIR certification and project approval by the Dublin City Council for the proposed project, the project applicant will be required to submit detailed civil engineering and architectural plans as part of the Site Development Review Permit process. These plans would be required to conform with all applicable City, State, and federal regulations, including those related to design.

The project would not substantially alter the visual character of the surrounding area; however, the project would alter the visual character of the project site by replacing the undeveloped land with a mix of residential and commercial development. The building heights, massing and materials, setbacks and architectural and landscape criteria are generally consistent with the surrounding land uses and the project site includes landscaping, sidewalks, and signage that creates a consistent streetscape; see **Figure 3-7 (a-b): Project Renderings**. In addition, the proposed project would be required to undergo site-specific design review to ensure the project is consistent with the City of Dublin design standards and performance standard related to aesthetics and to less the severity of the visual change resulting from the proposed project. Therefore, the project would result in a less-than-significant impact to the visual character of the project site and surrounding area. Impacts would be Class III, less than significant, and no mitigation measures are required.

Impact AES-4: Introduce new light and glare to the project site and project area (Class II).

The project site is vacant land with no existing sources of light or glare, with the exception of minimal temporary lighting associated with seasonal uses. Nearby sources of light and glare include street lighting and vehicle traffic along Tassajara Road, Brannigan Street, Dublin Boulevard, Central Parkway, Gleason Drive as well as freeway lighting and vehicle traffic along I

- 580. Other sources of existing lighting and glare in the surrounding area include surface parking lighting of the commercial uses to the west and southeast, residential uses to the north and east and the public park to the west.

Implementation of the project would include additional sources of residential and commercial indoor lighting, outdoor/security lighting, parking area lighting, and illuminated signage. Development pursuant to the project would result in a greater intensity of uses as compared to existing conditions due to an increased number of structures (residential units and commercial facilities), additional streets, and other land uses that is typical of an urban density development.

Exterior project lighting would consist of wall- and pole-mounted fixtures around the perimeters of buildings, landscaped areas, pedestrian pathways, streets, and in parking areas on the project site. The open side and driving range outfield of the Topgolf facility would also be illuminated. Typical illumination for a Topgolf includes building mounted sports lighting standards directed downward at the driving range outfield and illuminated round, ground targets in the driving range outfield. Though lighting would be designed to minimize spill, light from these fixtures could spill beyond the project site and result in significant light and glare impacts.

Implementation of **Mitigation Measure AES-4.1: Exterior Lighting Control Plan**, would reduce the impact to a less-than-significant level (Class II).

Mitigation for Impact AES-4

MM AES-4.1 Exterior Lighting Control Plan

To minimize the adverse impact associated with light and glare, the applicant shall submit an exterior lighting control plan for review and approval by the Community Development Director prior to issuance of a building permit for vertical construction for building lighting or approval of the final landscape plan for all other site lighting.

The exterior lighting control plan shall address the design and installation of all permanent exterior lighting and all temporary construction lighting such that: (a) lamps and reflectors are not directly visible from beyond the project site, as feasible; (b) lighting does not cause excessive reflected glare; (c) direct lighting does not illuminate the nighttime sky; (d) illumination of the project and its immediate vicinity is minimized; and (e) the lighting mitigation plan complies with all relevant local policies and ordinances.

The exterior lighting control plan shall include the following:

- A photometric study that demonstrates spillover horizontal foot-candle (fc) levels do not exceed 1.0 fc at the project site boundary;
- Identification of the location and direction of light fixtures that take the lighting control requirements into account;

- Lighting design that considers setbacks of project features from the site boundary to aid in satisfying the lighting control requirements;
- Lighting design that incorporates fixture hoods/shielding, with light directed downward or toward the area to be illuminated;
- Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the project boundary, except where necessary for security;
- Lighting fixtures that have a minimum necessary brightness, consistent with operational safety and security; and
- Where lights in high illumination areas are not occupied on a continuous basis, utilize timer switches or motion detectors so that the lights operate only when the area is occupied.

5.6.4 Cumulative Impact Analysis

The geographic context for the analysis of cumulative aesthetic impacts includes the project site viewshed and the visual character of its surroundings in the City of Dublin. Cumulative projects considered are those that could be seen in proximity to the project site and taken together would result in a substantial change to the project site viewshed.

Impact AES-5: Contribute to cumulatively considerable aesthetic impacts (Class II).

The geographic scope of the cumulative aesthetics, light, and glare analysis is the area surrounding the project site. This is the area within view of the project and, therefore, the area most likely to experience changes in visual character or experience light and glare impacts.

The area surrounding the project site is entirely developed with the exception of a vacant parcel just north of Lowe's which was part of the larger Grafton Station Planned Development.

The project vicinity is characterized by urban development and multi-family residential uses. Much of the surrounding project area has been developed relatively recently in compliance with the General Plan, the EDSP, and the City's municipal code requirements related to design and visual character. Compliance with these standards as well as the City's review and approval role in the planning process will help to create a visually compatible and cohesive development pattern in the surrounding area. Therefore, there is currently no existing cumulatively significant visual aesthetic impact within the project area.

The project would be developed in several phases over a period of approximately four years. The project would feature buildings as high as three stories and nets and support poles up to 190 feet. However, compliance with the EDSP and the Eastern Dublin Scenic Corridor Policies and Standards and the use of site planning techniques such as setbacks, structure placement,

and landscaping, the visual appearance of the project would be softened such that it would be compatible with its surroundings.

Therefore, with implementation of **MM AES-4.1: Exterior Lighting Control Plan**, the project in conjunction with other planned and approved projects, would not have a cumulatively significant impact relating to aesthetics, light, and glare.

5.6.5 Level of Significant After Mitigation

Table 5-1: Summary of Impacts and Mitigation Measures – Aesthetics summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to aesthetics.

Table 5-1: Summary of Impacts and Mitigation Measures – Aesthetics

Impact	Impact Significance	Mitigation
Impact AES-1: Adversely effect a scenic vista (Class III).	Less than Significant	None required.
Impact AES-2: Substantially damage scenic resources within a state scenic highway (Class III).	Less than Significant	None required.
Impact AES-3: Substantially alter the visual character of the project site and project area, or substantially change a scenic vista (Class III).	Less than Significant	None required.
Impact AES-4: Introduce new light and glare to the project site and project area (Class II).	Less than Significant with Mitigation	MM AES-4.1: Exterior Lighting Control Plan
Impact AES-5: Contribute to cumulatively considerable aesthetic impacts (Class II).	Less than Significant with Mitigation	MM AES-4.1: Exterior Lighting Control Plan

5.7 References

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Source: Project Application, 2022

Figure 5-1: Rendering of Topgolf Building Massing from Viewpoint 2

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6 Air Quality

6.1 Introduction

This chapter describes the existing setting of the project site as it relates to air quality; identifies associated regulatory conditions and requirements; presents the criteria used to evaluate potential impacts on air quality; and identifies mitigation measures to reduce or avoid each significant impact. The significance of each impact after the incorporation of identified mitigation measures is included at the end of this chapter.

Information used to prepare this chapter came from the following sources:

- Project application and related materials
- Air quality data provided by the California Air Resources Board (CARB)
- California Environmental Quality Act (CEQA) Air Quality Guidelines
- Bay Area Air Quality Management District (BAAQMD), *Clean Air Plan* 2017
- City of Dublin, *General Plan* 1985 as amended 2022

6.2 Scoping Issues Addressed

During the public comment scoping period for the project, no comments regarding air quality were raised.

6.3 Environmental Setting

This section presents information on air quality conditions in the project area. The Regional Setting provides information on the baseline conditions in the region. The Project Setting defines the project area and describes baseline conditions for air quality within it.

6.3.1 Climate and Topography

The project site is located within the San Francisco Bay Area Air Basin (Air Basin), which includes Alameda County, Contra Costa County, Marin County, Napa County, San Francisco County, San Mateo County, and Santa Clara County. The Air Basin composes of an area of approximately 5,340 square miles in the San Francisco Bay Area. Bay Area Air Quality Management District (BAAQMD) is responsible for local control and monitoring of criteria air pollutants throughout the Air Basin.

The climate of the Air Basin is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the West Coast of North America in the summer. During winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the region. During the summer, the large-scale meteorological condition that

dominates the West Coast is a semi-permanent high-pressure cell centered over the northeastern portion of the Pacific Ocean.

Climatological conditions, an area's topography, and the quantity and type of pollutants released commonly determine ambient air quality. The project site is located in central Alameda County in the San Francisco Bay Area, in the City of Dublin.

Climate, or the average weather condition, affects air quality in several ways. Wind patterns can remove or add air pollutants emitted by stationary or mobile sources. Inversion, a condition where warm air traps cooler air underneath it, can hold pollutants near the ground by limiting upward mixing (dilution). Topography also affects the local climate, as valleys often trap emissions by limiting lateral dispersal.

6.3.2 Air Pollutants of Primary Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_x), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead are primary air pollutants. Of these, CO, NO_x, SO₂, PM₁₀, and PM_{2.5} are criteria pollutants. ROG and NO_x are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O₃) is formed by a chemical reaction between ROG and NO_x in the presence of sunlight. O₃ and nitrogen dioxide (NO₂) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in [Table 6-1: Air Contaminants and Associated Public Health Concerns](#).

Ozone, or smog, is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between ROG and NO_x in the presence of sunlight. Ozone formation is greatest on warm, windless, sunny days. The main sources of NO_x and ROG, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) the evaporation of solvents, paints, and fuels, and biogenic sources. Automobiles are the single largest source of ozone precursors in the Basin. Tailpipe emissions of ROG are highest during cold starts, hard acceleration, stop-and-go conditions, and slow speeds. They decline as speeds increase up to about 50 miles per hour (mph), then increase again at high speeds and high engine loads. ROG emissions associated with evaporation of unburned fuel depend on vehicle and ambient temperature cycles. Nitrogen oxide emissions exhibit a different curve; emissions decrease as the vehicle approaches 30 mph and then begin to increase with increasing speeds.

Ozone levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

Table 6-1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM ₁₀ and PM _{2.5})	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O ₃)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC) ¹ and nitrogen oxides (NO _x) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO ₂)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO ₂)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.
¹ Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association (CAPCOA), <i>Health Effects</i> , capcoa.org/health-effects/ , accessed February 1, 2022.		

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine.

Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

6.3.3 Ambient Air Quality

Local air districts and CARB monitor ambient air quality to ensure that air quality standards are met, and if they are not met, to also develop strategies to meet the standards. **Table 6-2: Current National and State Ambient Air Quality Standards** shows the federal and State standards for a number of pollutants.

Table 6-2: Current National and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards		California Standard	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone	1-Hour	---	N/A ⁵	0.09 ppm	N
	8-Hour	0.070 ppm	N ⁴	0.070 ppm	N ⁹
Carbon Monoxide	8-Hour	9.0 ppm	A ⁶	9.0 ppm	A
	1-Hour	35.0 ppm	A	20.0 ppm	A
Nitrogen Dioxide	Annual	0.053 ppm	A	0.030 ppm	---
	1-Hour	0.10 ppm ¹¹	U	0.18 ppm	A
Sulfur Dioxide	Annual	0.03 ppm	A	NA	---
	24-Hour	0.14 ppm	A	0.04 ppm	A
	1-Hour	0.075 ppm	A	0.25 ppm	A
PM ₁₀	Annual	NA	---	20 µg/m ³	N ⁷
	24-Hour	150 µg/m ³	U	50 µg/m ³	N
PM _{2.5}	Annual	12 µg/m ³	N	12 µg/m ³	N ⁷
	24-Hour	35 µg/m ³	U/A	NA	---
Sulfates	24- Hour	25 µg/m ³	A	NA	---
Lead	30-Day Average	NA	A	1.5 µg/m ³	---
	Calendar Quarter	1.5 µg/m ³	A	NA	---
	Rolling 3-Month Average	0.15 µg/m ³	---	NA	---
Hydrogen Sulfide	1 Hour	NA	---	0.03 ppm (0.15 µg/m ³)	U
Vinyl Chloride	24 Hour	NA	---	0.01 ppm (26 µg/m ³)	---
Visibility Reducing Particles ⁸	8 Hour (10:00 to 18:00 PST)	---	---	---	U

A = attainment; N = nonattainment; U = unclassified; N/A = not applicable or no applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = not indicated or no information available.

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM₁₀, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.
2. National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³. Except for the national particulate standards, annual standards are

Pollutant	Averaging Time	Federal Primary Standards		California Standard	
		Concentration	Attainment Status	Concentration	Attainment Status
met if the annual average falls below the standard at every site. The national annual particulate standard for PM10 is met if the 3-year average falls below the standard at every site. The annual PM2.5 standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.					
3.	National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.				
4.	On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.				
5.	The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.				
6.	In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.				
7.	In June 2002, CARB established new annual standards for PM2.5 and PM10.				
8.	Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.				
9.	The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.				
10.	On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour PM2.5 national standard. This EPA rule suspends key SIP requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this EPA action, the Bay Area will continue to be designated as “nonattainment” for the national 24-hour PM2.5 standard until such time as the Air District submits a “redesignation request” and a “maintenance plan” to EPA, and EPA approves the proposed redesignation.				
11.	To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.				
12.	On June 2, 2010, the U.S. EPA established a new 1-hour SO2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO2 NAAQS.				
13.	CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure below which there are no adverse health effects determined.				
14.	National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.				
15.	In December 2012, EPA strengthened the annual PM2.5 National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter (µg/m³). In December 2014, EPA issued final area designations for the 2012 primary annual PM2.5 NAAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.				

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Depending on whether the standards are met or exceeded, the local air basin is classified as in “attainment” or “non-attainment.” Some areas are unclassified, which means no monitoring data is available. Unclassified areas are considered to be in attainment. **Table 6-3: Attainment Status of the San Francisco Bay Area Air Basin** summarizes the State and federal attainment status for criteria pollutants in the Air Basin.

Table 6-3: Attainment Status of the San Francisco Bay Area Air Basin

Pollutant	State Standard	Federal Standard
Ozone (O ₃)	Non-attainment ¹	Non-attainment ²
Inhalable Particulates (PM ₁₀)	Non-attainment ³	Unclassified
Fine Particulates (PM _{2.5})	Non-attainment ³	Unclassified
Carbon Monoxide (CO)	Attainment	Attainment ⁴
Nitrogen Dioxide (NO _x)	Attainment	--- ⁵
Sulfur Dioxide (SO _x)	Attainment	--- ⁶
Lead (Pb)	---	Attainment ⁷

Notes:

1. The CARB approved the 8-hour CA ozone standard on April 28, 2005 and became effective May 17, 2006.
2. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
3. In June 2002, the CARB established new annual standards for PM_{2.5} and PM₁₀.
4. In April 1998, the Bay Area was re-designated to attainment for the national 8-hour carbon monoxide standard.
5. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.
6. On June 2, 2010, the U.S. EPA established a new 1-hour SO₂ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO₂ NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO₂ NAAQS. EPA expects to make designation for the Bay Area by the end of 2017.
7. The final rule for rolling 3-month average was signed October 15, 2008. Final designations effective December 31, 2011.

Non-attainment pollutants are highlighted in **Bold**.

Source: BAAQMD, 2017b. Air Quality Standards and Attainment Status.

As shown in **Table 6-3: Attainment Status of the San Francisco Bay Area Air Basin**, although the BAAQMD is in attainment or unclassifiable as to all NAAQS, it is designated as non-attainment with respect to the more stringent State PM₁₀ standard and the State's 8-hour ozone standard.

BAAQMD operates 40 air monitoring stations within the nine Bay Area counties. There are seven active monitoring stations within Alameda County: Berkeley Aquatic Park, Hayward, three within Oakland, and two in Livermore. The nearest monitoring station to the project site is the Livermore monitoring station (approximately 4.8 miles east of the project site). However, the Livermore monitoring station does not measure PM₁₀ and therefore the Concord monitoring station summary averages were used. **Table 6-4: Ambient Air Quality Data** lists the monitored maximum concentrations and number of exceedances of federal or state air quality standards for each year.

Table 6-4: Ambient Air Quality Data

Pollutant	2018	2019	2020
Ozone (O ₃) ¹			
1-hour Maximum Concentration (ppm)	0.099	0.105	0.095
8-hour Maximum Concentration (ppm)	0.078	0.078	0.077
<i>Number of Days Standard Exceeded</i>			
CAAQS 1-hour (>0.09 ppm)	2	4	1
NAAQS 8-hour (>0.070 ppm)	3	7	2
Nitrogen Dioxide (NO ₂) ²			
1-hour Maximum Concentration (ppb)	64.0	63.7	62.6
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-hour (>100 ppb)	0	0	0
CAAQS 1-hour (>18 ppb)	0	0	0
Particulate Matter Less Than 2.5 Microns (PM _{2.5}) ²			
National 24-hour Maximum Concentration	164.7	29.1	123.8
State 24-hour Maximum Concentration	164.7	29.1	123.8
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>150 µg/m ³)	13	0	17
CAAQS 24-hour (>50 µg/m ³)	NM	NM	NM
Particulate Matter Less Than 10 Microns (PM ₁₀) ¹			
National 24-hour Maximum Concentration	172.6	28.8	122.0
State 24-hour Maximum Concentration	172.6	28.8	122.0
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>150 µg/m ³)	14	0	17
CAAQS 24-hour (>50 µg/m ³)	NM	NM	NM
NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppb = parts per billion; µg/m ³ = micrograms per cubic meter; NM = not measured ¹ Measurements taken at the Livermore-793 Rincon Avenue Monitoring Station (CARB #60344). ² Measurements taken at the Pleasanton-Owens Court Monitoring Station (CARB #60353).			
Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (arb.ca.gov/adam).			

Given that the BAAQMD is designated as non-attainment for State standards for ozone and PM₁₀, these are the primary pollutants of concern for the BAAQMD. As indicated in **Table 6-4: Ambient Air Quality Data**, there were several federal ozone exceedances at the nearest BAAQMD monitoring station in 2019 and 2020. The State 1-hour average exceed two days in 2018, four days in 2019, and one day in 2020. The federal standards for PM₁₀ were exceeded

14 days in 2018, zero days in 2019, and 17 days in 2020. The federal standards for PM_{2.5} were exceeded for 13 days in 2018, zero days in 2019 and 17 days in 2020.

6.3.4 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive receptors in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The project site is located in an urban area in City of Dublin. The surrounding land uses are residential to the north, east and west, with commercial uses to the east and west.

The closest sensitive receptors to the project site include residential uses located adjacent to the north, east, and west.

6.4 Applicable Regulations, Plans, and Standards

This analysis has been prepared pursuant to California Environmental Quality Act of 1970 and associated Guidelines (Public Resources Code 21000 *et seq.* and California Code of Regulations, Title 14, Chapter 3 sections 15000 – 15387) and in accordance with local, State and federal laws, including those administered by BAAWMD, CARB, and the EPA. The principal air quality regulatory mechanisms include the following:

- Federal Clean Air Act (FCAA), in particular, the 1990 amendments;
- California Clean Air Act (CCAA);
- California Health and Safety Code (H&SC), in particular, Chapter 3.5 (Toxic Air Contaminants) (H&SC Section 39650 *et. seq.*) and Part 6 (Air Toxics “Hot Spots” Information and Assessment) (H&SC Section 44300 *et. seq.*).
- BAAQMD’s Rules and Regulations and air quality planning documents

6.4.1 Federal and State

As discussed below, the federal and State governments have been empowered by FCAA and CCAA, respectively, to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. U.S. EPA is the federal agency designated to administer air quality regulation, while CARB is the State equivalent in California. Local control in air quality management is provided by CARB through county-level or regional (multi-county) air pollution control districts (APCDs). CARB establishes air quality standards and is responsible for control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. CARB has established 14 air basins statewide.

Federal Clean Air Act

U.S. EPA is charged with implementing national air quality programs. U.S. EPA's air quality mandates are drawn primarily from the FCAA. The FCAA was passed in 1963 by the U.S. Congress and has been amended several times. The 1970 FCAA amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including non-attainment requirements for areas not meeting NAAQS and the Prevention of Significant Deterioration program. The 1990 FCAA amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the U.S. The FCAA allows states to adopt more stringent standards or to include other pollution species.

National Ambient Air Quality Standards

The FCAA requires U.S. EPA to establish primary and secondary NAAQS for a number of criteria air pollutants. The air pollutants for which standards have been established are considered the most prevalent air pollutants that are known to be hazardous to human health. NAAQS have been established for the following pollutants: O₃, CO, SO₂, PM₁₀, PM_{2.5}, and Pb.

Title III of the Federal Clean Air Act

As discussed above, HAPs are the air contaminants identified by the U.S. EPA as known or suspected to cause cancer, other serious illnesses, birth defects, or death. The FCAA requires the U.S. EPA to set standards for these pollutants and reduce emissions of controlled chemicals. Specifically, Title III of the FCAA requires the U.S. EPA to promulgate National Emissions Standards for Hazardous Air Pollutants (NESHAP) for certain categories of sources that emit one or more pollutants that are identified as HAPs. The FCAA also requires the U.S. EPA to set standards to control emissions of HAPs through mobile source control programs. These include programs that reformulated gasoline, national low emissions vehicle standards, Tier 2 motor vehicle emission standards, gasoline sulfur control requirements, and heavy-duty engine standards.

HAPs tend to be localized and are found in relatively low concentrations in ambient air. However, they can result in adverse chronic health effects if exposure to low concentrations occurs for long periods. Many HAPs originate from human activities, such as fuel combustion and solvent use. Emission standards may differ between "major sources" and "area sources" of the HAPs/TACs. Under the FCAA, major sources are defined as stationary sources with the potential to emit more than 10 tons per year (tpy) of any one HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources.

Mobile source air toxics (MSATs) are a subset of the 188 HAPs. Of the 21 HAPs identified by the U.S. EPA as MSATs, a priority list of six HAPs were identified that include: diesel exhaust, benzene, formaldehyde, acetaldehyde, acrolein, and 1, 3-butadiene. While vehicle miles traveled in the United States are expected to increase by 45 percent over the period 2010 to

2050, a combined reduction of 91 percent in the total annual emissions for the priority MSAT is projected for the same time period.¹

California Clean Air Act

The CCAA, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. CARB is the State air pollution control agency and is a part of the California Environmental Protection Agency (Cal EPA). CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California, and for implementing the requirements of the CCAA. CARB oversees local district compliance with California and federal laws, approves local air quality plans, submits the State Implementation Plans (SIPs) to U.S. EPA, monitors air quality, determines and updates area designations and maps, and sets emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

California Ambient Air Quality Standards

The CCAA requires CARB to establish CAAQS. Similar to the NAAQS, CAAQS have been established for the following pollutants: O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, Pb, vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In most cases, the CAAQS are more stringent than the NAAQS. The CCAA requires that all local air districts in the State endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources.

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs² in California primarily are regulated through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588) (Hot Spots Act). As discussed above, HAPs/TACs are a broad class of compounds known to cause morbidity or mortality (cancer risk). HAPs/TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g. dry cleaners). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State and federal level.

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are necessary before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted the U.S. EPA's list of HAPs as TACs. In 1998, DPM was added to CARB's list of TACs. Once a TAC is identified, CARB adopts an Airborne Toxic Control Measure for sources that emit that particular

¹ Federal Highway Administration, 2016. Updated. *Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*.

² TACs are referred to as HAPs under the FCAA.

TAC. If a safe threshold exists at which no toxic effect occurs from a substance, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

The Hot Spots Act requires for existing facilities that emit toxic substances above a specified level to prepare a toxic emissions inventory and a risk assessment if the emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

Diesel Exhaust and Diesel Particulate Matter

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This mixture makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by CARB, and are listed as carcinogens either under State Proposition 65 or under the Federal Hazardous Air Pollutants programs.

CARB reports that recent air pollution studies have shown an association between diesel exhaust and other cancer-causing toxic air contaminants emitted from vehicles and much of the overall cancer risk from TACs in California. DPM was found to compose much of that risk. CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium- and heavy-duty diesel trucks that generate the bulk of DPM emissions from California highways. These include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleet regulations, and the heavy-duty diesel truck and bus regulations.

The regulation requires affected vehicles to meet specific performance requirements between 2011 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or the equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle. With implementation of CARB's Risk Reduction Plan, DPM concentrations are expected to be reduced by 85 percent in 2020 from the estimated year-2000 level.³ As emissions are reduced, risks associated with exposure to emissions also are expected to be reduced.

CARB Air Quality and Land Use Handbook

In April 2005, CARB released the final version of its *Air Quality and Land Use Handbook: A Community Health Perspective*. This guidance document is intended to encourage local land use agencies to consider the risks from air pollution before they approve the siting of sensitive

³ CARB. 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. <https://www.arb.ca.gov/diesel/documents/rrpFinal.pdf>

land uses (e.g. residences) near sources of air pollution, particularly TACs (e.g. freeway and high traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations and industrial facilities). These advisory recommendations include general setbacks or buffers from air pollution sources. However, unlike industrial or stationary sources of air pollution, the siting of new sensitive land use does not require air quality permits or approval by air districts, and as noted above, the CARB handbook provides guidance only rather than binding regulations.

CARB 2017 Technical Advisory (Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways)

CARB published a Technical Advisory in 2017 to provide planners and other stakeholders involved in land use planning and decision-making with information on scientifically based strategies to reduce exposure to traffic emissions near high-volume roadways. Near-roadway development is a result of a variety of factors, including economic growth, demand for built environment uses, and the scarcity of developable land in some areas.

The Technical Advisory notes that research has demonstrated the public health, climate, financial, and other benefits of compact, infill development along transportation corridors, and demonstrates that planners, developers, and local governments can pursue infill development while simultaneously reducing exposure to traffic-related pollution. On-site strategies to remove air pollution identified in the Technical Advisory include the use of particle filtration systems (i.e., high efficiency filtration in mechanical ventilation systems), solid barriers, and vegetation.

California Energy Commission - Title 24 Building Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in California Code of Regulations (CCR) Title 24 Part 6, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Energy Standards include requirements for mandatory mechanical ventilation intended to improve indoor air quality in homes, and requirements for Minimum Efficiency Reporting Value (MERV) 13 air filtration on space conditioning systems, and ventilation systems that provide outside air to a dwelling's occupiable space.

The Residential Compliance Manual for the 2019 Building Energy Efficiency Standards notes that air filter efficiencies of at least MERV 13 protect occupants from exposure to the smaller airborne particles (i.e., PM_{2.5}) that are known to adversely affect respiratory health. CCR Title 24 Part 6 requires a particle size efficiency rating equal to or greater than 85 percent in the 1.0 to 0.3 µg range.

6.4.2 Regional

The BAAQMD regulates air quality in the SFBAAB and is responsible for attainment planning related to criteria air pollutants and for district rule development and enforcement. The district

inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law. It also reviews air quality analyses prepared for CEQA assessments and has published the *CEQA Air Quality Guidelines* documents for use in evaluation of air quality impacts.

Air Quality Management Plan

The BAAQMD is responsible for developing a Clean Air Plan, which guides the region's air quality planning efforts to attain the CAAQS. The BAAQMD adopted the 2017 Clean Air Plan on April 19, 2017. The 2017 Clean Air Plan contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_x), particulate matter, TACs, and greenhouse gas emissions. The Bay Area 2017 Clean Air Plan updates the Bay Area 2010 Clean Air Plan in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone; provides a control strategy to reduce ozone, PM, TACs, and greenhouse gases in a single, integrated plan; reviews progress in improving air quality in recent years; and establishes emission control measures to be adopted or implemented in both the short term and through 2050.

The following BAAQMD rules would limit emissions of air pollutants from construction and operation of the project:

- *Regulation 6, Rule 3. Wood-Burning Devices.* The purpose of this rule is to limit emissions of particulate matter and visible emissions from wood-burning devices used for primary heat, supplemental heat or ambiance.
- *Regulation 8, Rule 3. Architectural Coatings.* This rule governs the manufacture, distribution, and sale of architectural coatings and limits the reactive organic gases content in paints and paint solvents. Although this rule does not directly apply to the project, it does dictate the ROG content of paint available for use during the construction.
- *Regulation 8, Rule 15. Emulsified and Liquid Asphalts.* This rule dictates the reactive organic gases content of asphalt available for use during construction through regulating the sale and use of asphalt and limits the ROG content in asphalt. Although this rule does not directly apply to the project, it does dictate the ROG content of asphalt for use during the construction.
- *Regulation 9, Rule 8. Organic Compounds.* This rule limits the emissions of nitrogen oxides and carbon monoxide from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower.

BAAQMD prepared an Ozone Attainment Demonstration Plan to satisfy the federal 1-hour ozone planning requirement because of the Air Basin's nonattainment for federal and State ozone standards. The U.S. EPA revoked the 1-hour ozone standard and adopted an 8-hour

ozone standard. The BAAQMD will address the new federal 8-hour ozone planning requirements once they are established.

CARE Program

Initiated in 2004, the Community Air Risk Evaluation (CARE) program evaluates and reduces health risks associated with exposures to outdoor TACs in the Bay Area. The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust. The CARE program is ongoing and encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that include an assessment of the sources of TAC emissions, modeling, and measurement programs to estimate concentrations of TACs, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and a high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. BAAQMD has identified six affected communities, including Dublin, as in need of immediate action.

For commercial and industrial sources, the BAAQMD regulates TACs using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances, to provide a quantitative estimate of health risks. As part of ongoing efforts to identify and assess potential health risks to the public, the BAAQMD has collected and compiled air toxics emissions data from industrial and commercial sources of air pollution throughout the Bay Area.

BAAQMD CEQA Air Quality Guidelines

The BAAQMD *CEQA Air Quality Guidelines* were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the *CEQA Guidelines*. In May 2011, the updated BAAQMD *CEQA Air Quality Guidelines* were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

In May 2017, the BAAQMD published updated Guidelines responding to the 2015 California Supreme Court Decision in *California Building Industry Association v. Bay Area Air Quality Management District* (S213478) that CEQA does not generally require an agency to consider the effects of existing environmental conditions on a project's future users or residents, such as the effects of toxic air contaminants and fine particulate matter from existing sources on future residents or users of a project. Nevertheless, the Supreme Court stated that lead agencies still

must evaluate existing environmental conditions to assess whether a project could exacerbate hazards that are already present. The Supreme Court did not apply a holding to reach a conclusion on the validity of BAAQMD's receptor thresholds. Instead, the Supreme Court remanded the case to the Court of Appeal to decide the question in light of the Court's opinion. As of the date of this document, BAAQMD has not formally re-instated the thresholds.⁴

CALGreen

CALGreen is a set of mandatory green building standards for new construction that went into effect throughout California on January 1, 2011 and was most recently updated in 2022 with provisions effective in 2023. These building standards apply to all new public and privately-constructed commercial and residential buildings. CALGreen is referred to officially as the California Green Building Standards Code and includes a matrix of mandatory requirements tailored to residential and non-residential building classifications, as well as two sets of voluntary measures (CALGreen Tier 1 and Tier 2) that provide a host of more stringent sustainable building practices and features.

6.4.3 Local

City of Dublin General Plan

The City of Dublin's General Plan contains the following policies associated with air quality that are relevant to the project:

Implementing Policy 7.5.1.A.1: Request that the Bay Area Air Quality Management District establish an air quality monitoring station in Dublin.

Implementing Policy 7.5.1.A.2: Require an air quality analysis for new development projects that could generate significant air emissions on a project and cumulative level. Air quality analyses shall include specific feasible measures to reduce anticipated air quality emissions to a less than significant California Environmental Quality Act (CEQA) level.

Guiding Policy 13.3.2.A

1. Encourage the installation of alternative energy technology in new residential and commercial development.
2. Encourage designing for solar access.
3. Encourage energy efficient improvements be made on residential and commercial properties.

⁴The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) provides grant funding for cleaner-than-required engines and equipment. Local air districts administer these grants and select which projects to fund.

Implementing Policies 13.3.2.B

3. In new commercial and residential parking lots, require the installation of conduit to serve electric vehicle parking spaces to enable the easier installation of future charging stations.
4. Encourage the installation of charging stations for commercial projects over a certain size and any new residential project that has open parking (i.e. not individual, enclosed garages).

6.5 Environmental Impacts and Mitigation Measures

6.5.1 Significance Criteria

The following significance criteria for air quality were derived from the Environmental Checklist in the State CEQA Guidelines Appendix G. Exceedance of a CAAQS or NAAQS for any criteria pollutant (as determined by modeling).

- Conflicts with or obstruct implementation of the applicable air quality plan (i.e. Clean Bay Area 2017).
- Results 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.
- Exposes sensitive receptors to substantial pollutant concentrations.
- Result on other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Air Quality Thresholds

Under CEQA, the BAAQMD is an expert commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the FCAA, the BAAQMD has adopted Federal attainment plans for ozone (O₃) and particulate matter 2.5 microns in diameter or less (PM_{2.5}). The BAAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any Federal attainment plan.

The BAAQMD *CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans Justification Report* (April 2022) establishes thresholds based on substantial evidence, and the thresholds are consistent with the thresholds outlined within the 2017 BAAQMD *CEQA Air Quality Guidelines*. The thresholds have been developed by the BAAQMD to attain State and Federal ambient air quality standards.

Construction Emissions

The regional construction emissions associated with the project were calculated using the most recent version of CalEEMod with default inputs for the type and size of proposed land uses, including the types and number of pieces of equipment that would be used on-site during each construction phase and off-site vehicle trips that would result from construction activities on the project site.

CalEEMod is a computer model developed by the South Coast Air Quality Management District to estimate air pollutant and greenhouse gas (GHG) emissions from land use development projects and is based on parameters that include the duration of construction activity, area of disturbance, and anticipated equipment used during construction.

The following significance criteria for air quality were derived from BAAQMD's 2017 CEQA Air Quality Guidelines and are summarized in **Table 6-5: BAAQMD Significance Thresholds for Construction and Operational Emissions**.

Table 6-5: BAAQMD Significance Thresholds for Construction Emissions

Pollutant of Concern	Daily Threshold During Construction
ROG	54 lbs./ day
NO _x	54 lbs./ day
PM ₁₀	82 lbs./day (exhaust only)
PM _{2.5}	54 (exhaust only)
PM ₁₀ / PM _{2.5} (fugitive dust)	Best Management Practices

Note:

Project-Level emissions

Source: BAAQMD, 2017b. Air Quality Standards and Attainment Status

Short-term construction emission thresholds involve identifying the level of construction activity that could result in significant temporary impacts if not mitigated. Construction activities (e.g., excavation, grading, on-site vehicle movements) that directly exceed BAAQMD criterion for PM₁₀ PM_{2.5} would have a significant impact on local air quality when they are located nearby and upwind of sensitive receptors (BAAQMD, 2017c). Regarding ozone, construction projects using typical equipment that temporarily emits ozone precursors (i.e., ROG and NO_x) are accommodated in the emission inventories of State and federally required air quality management plans and would not have a significant impact on ozone concentrations (BAAQMD, 2017b).

If construction-related activities exceed the BAAQMD thresholds, the project would be characterized as contributing substantially to existing or new violations of the CAAQS.

The construction activities associated with the project would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators,

graders, dump trucks, and loaders. It is assumed that this type of equipment would be used during both grading/demolition and construction. It is also assumed that all of the construction equipment used would be diesel-powered.

Complete results from CalEEMod and assumptions can be viewed in [Appendix B](#).

Operational Emissions

As shown in [Table 6-6: BAAQMD Significance Thresholds for Operational Emissions](#), operational emissions associated with on-site development were estimated using CalEEMod. Operational emissions would comprise mobile source emissions, emissions associated with energy consumption, and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the project site associated with operation of a project. Emissions attributed to energy use include electricity and natural gas consumption for space and water heating and cooling. Area source emissions are generated by, for example, landscape maintenance equipment, consumer products, and architectural coatings.

Table 6-6: BAAQMD Significance Thresholds for Operational Emissions

Pollutant of Concern	Daily Threshold During Operation	Maximum Annual Emissions During Operations (tpy)
ROG	54 lbs./ day	10
NO _x	54 lbs./ day	10
PM ₁₀	82 lbs./day	15
PM _{2.5}	54 lbs./day	10
Local CO	9.0 ppm (8- hour average), 20.0 ppm (1-hour average)	

Note:

Project-Level emissions

Source: BAAQMD, 2017b. Air Quality Standards and Attainment Status

The criteria for assessing cumulative impacts on localized air quality (i.e. the cumulative impacts of CO and PM₁₀) are identical to those for individual project operation. The criteria for determination of a project's cumulative impact on regional ozone levels depends on consistency with the applicable AQMP. Consistency with the AQMP does not mean that a project will not have a significant project-specific adverse air quality impact. However, inconsistency with the AQMP is considered a significant cumulative adverse air quality impact. The Association of Bay Area Governments also provides consistency determinations for population-related projects. A quantitative CO impact analysis is not required, if the following criteria are met:

- Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.

- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

BAAQMD guidelines state that odor impacts would be significant if there have been five complaints per year averaged over three years within certain screening thresholds. If construction or operation of the project would emit pollutants associated with odors in substantial amounts, the analysis should assess the impact on existing or reasonably foreseeable sensitive receptors.

The BAAQMD's *2017 Clean Air Plan* was prepared to accommodate growth, meet State and Federal air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. According to the BAAQMD *CEQA Air Quality Guidelines*, project-related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary. If a project exceeds these emission thresholds, the BAAQMD *CEQA Air Quality Guidelines* states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

Significance Classifications

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

Impact Assessment Methodology

The analysis of air quality impacts conforms to the methodologies recommended in the BAAQMD's *CEQA Air Quality Guidelines*. The handbook includes thresholds for emissions associated with both construction and operation of projects.

6.5.2 Summary of No and/or Beneficial Impacts

There are no “no” impacts nor “beneficial” impacts.

6.5.3 Impacts of the Proposed Project

Impact AQ-1: Conflicts with or obstructs implementation of the San Francisco Bay Area 2017 Clean Air Plan. (Class I)

The project site is in the City of Dublin, which is located within the San Francisco Bay Area Air Basin (SFBAAB). The BAAQMD is responsible for assuring that the National and California Ambient Air Quality Standards (NAAQS and CAAQS) are attained and maintained in the SFBAAB. The SFBAAB exceeds the state air quality standards for ozone (O₃) and particulate matter (PM₁₀ and PM_{2.5}). The area is designated nonattainment for federal standards of 8-hour ozone, 24-hour PM_{2.5}, and State standards for 24-hour and annual PM₁₀, and annual PM_{2.5}.

The project is consistent with the BAAQMD 2017 *Clean Air Plan* policies that are applicable to the project. As discussed in [Table 6-7: Project Consistency with Applicable Clean Air Plan Control Measures](#), the project would comply with city, state, and regional requirements. However, as discussed below in Impacts AQ-2 and AQ-5, the project would exceed air quality thresholds with [MM AQ-2.1](#) through [AQ-2.5](#).

Table 6-7: Project Consistency with Applicable Clean Air Plan Control Measures

Control Measure	Project Consistency
Stationary Source Control Measures	
SS21: New Source Review of Toxic Air Contaminants	Consistent. This EIR has included preparation of a construction health risk analysis (see Impact discussion AQ-3), which found the project's toxic air contaminant emissions would result in less than significant cancer and non- cancer (acute and chronic) impacts to the nearby sensitive receptors with MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment .
SS25: Coatings, Solvents, Lubricants, Sealants and Adhesives	Consistent. The project would comply with Regulation 8, Rule 3: Architectural Coatings, which would dictate the ROG content of paint available for use during construction. The project would also implement MM AQ-2.3: Architectural Coating per BAAQMD Regulation 8, Rule 3 . MM AQ-2.3 also further restricts the ROG content of paint to ensure that BAAQMD thresholds are not exceeded.
SS26: Surface Prep and Cleaning Solvent	
SS29: Asphaltic Concrete	Consistent. Paving activities associated with the project would be required to utilize asphalt that does not exceed BAAQMD emission standards in Regulation 8, Rule 15.
SS30: Residential Fan Type Furnaces	Consistent. BAAQMD is the responsible party for implementation of this regulation and the project would use the latest central furnaces that comply with the applicable regulations. The project would not conflict with BAAQMD's implementation of that measure.

Control Measure	Project Consistency
SS31: General Particulate Matter Emissions Limitation	Consistent. Restaurants developed as part of the project would be required to utilize particulate emissions reduction equipment associated with their commercial cooking equipment.
SS32: Emergency Back-up Generators	Consistent. Use of back-up generators by the project is currently unknown. However, if emergency generators were to be installed, they would be required to meet the BAAQMD's emissions standards for back-up generators.
SS33: Commercial Cooking Equipment	Consistent. If any of the restaurants developed as part of the project install a charbroiler, a catalytic oxidizer system must also be installed pursuant to BAAQMD Rule 6-2.
SS34: Wood Smoke	Consistent. As per MM AQ-2.4: Wood Burning Fireplaces , wood burning fireplaces would be prohibited at the project.
SS36: Particulate Matter from Trackout	Consistent. Mud and dirt that may be tracked out onto the nearby public roads during construction activities shall be removed promptly by the contractor based on BAAQMD's requirements.
SS37: Particulate Matter from Asphalt Operations	Consistent. Paving and roofing activities associated with the project would be required to utilize best management practices to minimize the particulate matter created from the transport and application of road and roofing asphalt.
SS38: Fugitive Dust	Consistent. Material stockpiling and track out during grading activities as well as smoke and fumes from paving and roofing asphalt operations shall utilize best management practices to minimize the creation of fugitive dust.
SS40: Odors	Consistent. The project would comply with Regulation 7 to strengthen odor standards and enhance enforceability.
Transportation Control Measures	
TR2: Trip Reduction Programs	Consistent. The project would comply through various design features including using "smart growth" principles as an urban in-fill development with a mix of retail, entertainment, and residential uses adjacent to transit/multi-modal corridors and within two miles of a BART station. The project facilitates the use of existing bus routes with stops adjacent to the project site. The Livermore Amador Valley Transit Authority (LAVTA) runs bus service from the project site (Dublin Boulevard and Tassajara Road) to the BART station with 15-minute headways during peak commute hours. Additionally, the project would improve and complete pedestrian and bicycle connections around its perimeter and through the project site. Bicycle storage would be provided in the residential buildings as required and bicycle racks would be provided near the commercial uses. The project would also improve and complete bicycle lanes and facilities along the perimeter and through the project site that connect with existing bicycle routes. The project includes landscaped paseos and pedestrian pathways that would directly connect residents and retail patrons with adjacent open space, surrounding neighborhoods and nearby Emerald Glen Park.
TR8: Ridesharing and Last-Mile Connections	

Control Measure	Project Consistency
	Sidewalks on the streets surrounding the project site would be improved and a public multi-use trail would be constructed on the north side of Central Parkway and an on-street bicycle lane along Dublin Boulevard, Tassajara Road, Central Parkway, and Gleason Drive.
TR9: Bicycle and Pedestrian Access Facilities	Consistent. The project has existing class II bike lanes along Tassajara and Dublin Boulevard. Gleason Drive and Central Parkway, east and west of the project site have class II bicycle lanes. Additionally, the site has pedestrian connections and crosswalks to adjacent retail and commercial uses (e.g. Shops at Waterford, Grafton Plaza, Emerald Glen Park).
TR10: Land Use Strategies	Consistent. The project site is located within 1.5 miles of an existing BART rail station, adjacent to park and ride lot, and proposed infill and mixed-use.
TR13: Parking Policies	Consistent. The project is proposing the required amount of parking as per the City of Dublin Municipal Code.
TR19: Medium and Heavy Duty Trucks	Not Applicable. Although the project does not involve warehousing or industrial uses that would generate substantial truck trips, the project would not conflict with the implementation of this measure.
TR22: Construction, Freight and Farming Equipment	Consistent. The project would comply through implementation of MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment , which requires all construction equipment greater than 50 horsepower to meet the Tier 4 Final emissions standards.
Energy and Climate Control Measures	
EN1: Decarbonize Electricity Generation	Consistent. The project would be constructed in accordance with the latest building code and green building regulations/ CalGreen. The City of Dublin has a CalGreen Residential Building Checklist that the project would comply with.
EN2: Decrease Electricity Demand	
Building Control Measures	
BL1: Green Buildings	Consistent. The project would be constructed in accordance with the latest building code and green building regulations/ CalGreen. The project would comply with the City of Dublin’s CalGreen Residential Building Checklist.
L2: Decarbonize Buildings	
BL4: Urban Heat Island Mitigation	Consistent. The project would reduce urban heat island effects by providing green common spaces. The project would construct a parking structure shared between uses that would provide shade and reduce surface parking/asphalt and therefore minimize the urban heat island effect.
Natural and Working Lands Control Measures	
NW2: Urban Tree Planting	Consistent. The project would implement a landscape plan that is required to meet the City’s tree requirements in parking lots in order to reduce the urban heat island phenomenon that occurs in surface parking lots.

Control Measure	Project Consistency
Waste Management Control Measures	
WA1: Landfills	Consistent. The waste service provider for the project will be required to meet AB 341 and SB 939, 1374, and 1383 requirements that require waste service providers to divert waste.
WA3: Green Waste Diversion	Consistent. The waste service provider for the project will be required to meet AB 341 and SB 939, 1374, and 1383 requirements that require waste service providers to divert green waste.
WA4: Recycling and Waste Reduction	Consistent. The waste service provider for the project will be required to meet AB 341 and SB 939, 1374, and 1383 requirements that require waste to be recycled.
Water Control Measures	
WR2: Support Water Conservation	Consistent: The project would implement water conservation measures and low flow fixtures as per the requirements of Title 24 and CalGreen. The City of Dublin Municipal Code Chapter 8.88 has Water-Efficient Landscaping Regulations which includes various specifications for plant types, water features, and irrigation design etc.

Source: BAAQMD, 2017. Clean Air Plan and Kimley-Horn & Associates, 2022.

The 2017 Clean Air Plan assumptions for projected air emissions and pollutants in the city are based on the land use and development projection assumptions in the General Plan. The project site currently has a primary land use designation of General Commercial with a small area of Public/Semi-public and Neighborhood Commercial as well as varying densities of residential along Brannigan Street. The project requires a General Plan Amendment and Eastern Dublin Specific Plan Amendment to accommodate the proposed land use changes.

As described below in **Impact AQ-2**, construction and operational air quality emissions generated by the project would exceed the BAAQMD's emissions thresholds despite the implementation of mitigation measures. These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants.

Because the project would exceed these thresholds, the project would be considered by the BAAQMD to be a substantial emitter of criteria air pollutants and has the potential to result in an increase in the frequency or severity of existing air quality violations or delay timely attainment of air quality standards and contribute to non-attainment areas in the SFBAAB. Therefore, the project would potentially conflict with the 2017 Clean Air Plan and impacts would be significant and unavoidable (Class I).

Mitigation Measures

Refer to **MM AQ-2.1** through **AQ-2.5**, below.

Impact AQ-2: Violates any air quality standard or contributes substantially to an existing or projected air quality violation (Class I).**Construction Impacts**

Construction emissions would include the generation of fugitive dust, on-site generation of construction equipment exhaust emissions, and the off-site generation of mobile source emissions related to construction traffic. Short-term air quality impacts are predicted to occur during grading, and construction operations associated with implementation of the project. Emissions produced during grading and construction activities would cease following completion of the development.

Construction activities would include grading, off-site and on-site infrastructure, paving, building construction, and architectural coating. The resulting total cut and fill of soils for the project site is estimated to be approximately 96,300 cubic yards. Construction equipment includes excavators, rubber-tired dozers, graders, scrapers, trenchers, tractors, and pavers. Exhaust emission factors for typical diesel-powered heavy equipment are based on the California Emissions Estimator Model (CalEEMod) program defaults. Variables factored into estimating the total construction emissions include the level of activity, length of weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site.

Maximum daily emissions for each year of construction has been quantified based upon the phase durations and equipment types. The analysis of daily construction emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod). Refer to [Appendix B, Air Quality and Greenhouse Gas Emissions Analysis Technical Data](#), for the CalEEMod outputs and results. [Table 6-8: Construction Air Emissions](#) presents the anticipated daily construction emissions which would remain below their respective thresholds except for ROG and NO_x due to the overlap of several construction phases.

Table 6-8: Construction Air Emissions

Emissions Source	Pollutant (pounds per day)			
	ROG	NO _x	PM ₁₀ (exhaust)	PM _{2.5} (exhaust)
Year 1				
Unmitigated	23.47	253.77	10.25	9.48
Mitigated ¹	9.66	76.53	2.81	2.63
Year 2				
Unmitigated	97.65	385.91	15.66	14.54
Mitigated ¹	42.39	148.83	4.33	4.08
Year 3				
Unmitigated	89.39	285.89	10.82	10.07
Mitigated ¹	40.02	132.73	3.73	3.51
Year 4				
Unmitigated	105.73	196.71	7.35	6.88
Mitigated ¹	40.66	87.26	2.06	1.97
Year 5				
Unmitigated	49.82	78.32	2.43	2.30
Mitigated ¹	21.14	46.71	0.98	0.93
Year 6				
Unmitigated	44.62	40.27	1.30	1.20
Mitigated ¹	17.24	23.45	0.50	0.47
Maximum Unmitigated	105.73	385.91	15.66	14.54
Maximum Mitigated¹	42.39	148.84	4.33	4.08
BAAQMD Significance Thresholds	54	54	82	54
Threshold Exceeded?	No	Yes	No	No

Notes:

1. The reduction/credits for construction emission mitigations are based on mitigation included in CalEEMod and as typically required by the BAAQMD (Basic Control Measures and Regulation 6: Particulate Matter and Visible Emissions). The mitigation includes the following: replace ground cover on disturbed areas quickly, water exposed surfaces twice daily, and proper loading/unloading of mobile and other construction equipment. Additional mitigation involves compliance with an additional control measure requiring the use of CARB Certified low-NO_x emissions equipment and the use of low volatile organic compound (VOC) coatings (compliance with BAAQMD Regulation 8, Rule 3; Architectural Coatings). Additionally, the mitigated scenario would implement MM AQ-2.2, which would require all off-road diesel-powered construction equipment meet CARB Tier 4 Final emissions standards.

Source: Kimley-Horn & Associates, 2022.

Fugitive Dust. The project would include grading of the entire project during the initial phase. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. The BAAQMD recommends the implementation of all Basic Construction Mitigation Measures, whether or not construction-related emissions exceed applicable significance thresholds; refer to **MM AQ-2.1: BAAQMD Basic Construction Mitigation Measures**.

Construction Equipment and Worker Vehicle Exhaust. Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite.

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_x, PM₁₀, and PM_{2.5}. Despite the implementation of Basic Construction Mitigation Measures, NO_x thresholds would be exceeded during construction. Therefore, **MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment** would be required to reduce NO_x emissions. Despite implementation of **MM AQ-2.2**, NO_x emissions would remain above the BAAQMD's thresholds.

ROG Emissions. In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O₃ precursors. In accordance with the methodology prescribed by the BAAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. In addition, based upon the size of the buildings, architectural coatings were also quantified in CalEEMod.

The highest concentration of ROG emissions would be generated during the application of architectural coatings beginning in 2024. As required by law, all architectural coatings for the project structures would comply with BAAQMD Regulation 8, Rule 3: Architectural Coating. Regulation 8, Rule 3 provides specifications on painting practices and regulates the ROG content of paint. As indicated in **Table 6-8: Construction Air Emissions**, project construction would result in an exceedance of ROG thresholds despite the implementation of Basic Construction Measures in **MM AQ-2.1**. Therefore, compliance with **MM AQ-2.3: Architectural Coating** is also included to require the use of low VOC interior architectural coating (paint and primer) products. **MM AQ-2.3** requires interior architectural coatings to have a VOC content of 20 grams per liter or less while exterior architectural coating must be less than 100 grams per

liter. With implementation of MM AQ-2.3, construction ROG emissions would not exceed BAAQMD thresholds.

Total Daily Construction Emissions. As shown in Table 6-8: Construction Air Emissions, implementation of MM AQ-2.1 through MM AQ-2.3 would reduce construction emissions. However, NO_x emissions would remain significant and unavoidable (Class I).

Operation Impacts

The project would result in long-term operational stationary and vehicular emissions.

Operational emissions generated by both stationary and mobile sources would result from normal daily activities on the project site after occupation. Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, generators, and the use of consumer products. Mobile emissions would be generated by the motor vehicles traveling to and from the project site. Operational emissions attributable to the project are shown in Table 6-9: Project Buildout Operational Emissions – Unmitigated and are discussed below.

Table 6-9: Project Buildout Operational Emissions – Unmitigated

Emission Source	ROG	NO _x	PM ₁₀ (exhaust)	PM _{2.5} (exhaust)
Annual Emissions (tons per year)				
Area	7.55	0.10	0.44	0.44
Energy	0.13	1.18	0.09	0.09
Mobile	4.11	5.39	0.07	0.07
Total Emissions	11.80	6.67	0.60	0.60
<i>BAAQMD Threshold</i>	10	10	15	10
Are Thresholds Exceeded?	Yes	No	No	No
Winter Emissions (pounds per day)				
Area	392.13	8.16	67.30	67.30
Energy	0.73	6.48	0.50	0.50
Mobile	22.52	31.16	0.36	0.34
Total Emissions	415.38	45.80	68.16	68.14
<i>BAAQMD Threshold</i>	54	54	82	54
Are Thresholds Exceeded?	Yes	No	No	Yes
Summer Emissions (pounds per day)				
Area	392.13	8.16	67.30	67.30
Energy	0.73	6.48	0.50	0.50
Mobile	25.17	27.41	0.36	0.34
Total Emissions	418.03	42.05	68.16	68.14
<i>BAAQMD Threshold</i>	54	54	82	54
Are Thresholds Exceeded?	Yes	No	No	Yes

Notes:

Area source emissions include natural gas fuel combustion, landscape fuel combustion, consumer products, architectural coatings, and hearth fuel combustion (i.e., wood stoves, wood fireplaces, natural gas fireplace/stoves).

(1) Applies to Area Source (Direct) emissions of Carbon Monoxide only.

Source: CalEEMod v. 2020.4.0 and Kimley-Horn & Associates, 2022.

Stationary Source Emissions

Stationary source emissions would be generated due to an increased demand for electrical energy for the project's land use. Energy is generated from power plants utilizing fossil fuels. Electric power generating plants are distributed throughout the Air Basin and beyond, and their emissions contribute to the total pollutant burden across air basins. The primary use of natural

gas within the project would be for combustion to produce space heating, water heating and other miscellaneous heating or air conditioning.

Area Source Emissions

Area source emissions are generally a function of land use (e.g. number of single-family residential units), activity (e.g. fuel use per residential unit), and emission factor (e.g. mass of pollutant emitted per fuel usage). These include the following:

- Natural gas fuel combustion. This source includes natural gas combustion for water and space heating, in residential and non-residential buildings. The project would not include natural gas (see [Chapter 10: Greenhouse Gas Emissions](#) for more discussion).
- Hearth fuel combustion. This source includes wood stoves, wood fireplaces, and natural gas-fired stoves. The project would not include these amenities per [MM AQ-2.4: Wood Burning Fireplaces](#).
- Landscape fuel combustion. This source includes exhaust and evaporative emissions from landscaping equipment, including lawnmowers, rototillers, shredders/grinders, trimmers, chain saws, and hedge trimmers, used in residential and commercial applications.
- Consumer products. This source category comprises a wide range of products, including air fresheners, automotive products, household cleaners, and personal care products.
- Architectural coatings. This source includes ROG (similar to VOCs) emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings, from residential and nonresidential structures.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity usage associated with the project. The primary use of electricity by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As discussed in [Chapter 10: Greenhouse Gas Emissions](#) below, the project does not include natural gas per consistency with the City of Dublin's Climate Action Plan (CAP).

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_x, PM₁₀, and PM_{2.5} are all pollutants of regional concern (NO_x and ROG react with sunlight to form O₃ [photochemical smog], and wind currents readily transport PM₁₀ and PM_{2.5}). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

The amount of mobile source emissions that would be associated with the project is based on land use designations (e.g. number of single-family residential units; square footage of various

recreation, retail, and commercial uses), trip rates (i.e. the number of vehicle trips per day per land use unit), assumptions regarding the vehicle fleet (e.g. analysis year, vehicle type and technology class), trip lengths (i.e. miles traveled per trip), and pollutant emission factors (i.e. mass of pollutant emitted per mile traveled). Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the project were based on the project transportation analysis. Based on this analysis, the project would result in an average of approximately 19,911 new daily weekday vehicle trips.

The project would result in long-term operational emissions of criteria air pollutants and O₃ precursors (i.e., ROG and NO_x). Project-generated increases in emissions would be predominantly associated with motor vehicle use. As shown in **Table 6-9: Project Buildout Operational Emissions – Unmitigated**, daily ROG threshold would be exceeded. The predominant source of ROG emissions is fireplaces. Therefore, **MM AQ-2.4** is required to prohibit the use of wood burning devices (e.g., fireplaces, wood stoves) and ensure compliance with BAAQMD Regulation 6, Rule 3.

Table 6-9: Project Buildout Operational Emissions – Mitigated shows the project's operational emissions with the implementation of these mitigation measures. As indicated in **Table 6-10: Project Buildout Operational Emissions – Mitigated**, despite the implementation of **MM AQ-2.1** through **MM AQ-2.4**, operational emissions would remain significant and unavoidable (Class I).

Table 6-10: Project Buildout Operational Emissions – Mitigated

Emission Source	ROG	NOx	PM ₁₀ (exhaust)	PM _{2.5} (exhaust)
Annual Emissions (tons per year)				
Area	5.52	0.06	0.03	0.03
Energy	0.00	0.00	0.00	0.00
Mobile	4.11	5.39	0.07	0.06
Total Emissions	9.63	5.45	0.09	0.08
<i>BAAQMD Threshold</i>	10	10	15	10
Are Thresholds Exceeded?	No	No	No	No
Winter Emissions (pounds per day)				
Area	31.05	0.62	0.30	0.30
Energy	0.00	0.00	0.00	0.00
Mobile	22.52	31.16	0.36	0.34
Total Emissions	53.57	31.78	0.66	0.64
<i>BAAQMD Threshold</i>	54	54	82	54
Are Thresholds Exceeded?	Yes	No	No	Yes
Summer Emissions (pounds per day)				
Area	31.05	0.62	0.30	0.30
Energy	0.00	0.00	0.00	0.00
Mobile	25.17	27.41	0.36	0.34
Total Emissions	56.22	28.03	0.66	0.64
<i>BAAQMD Threshold</i>	54	54	82	54
Are Thresholds Exceeded?	Yes	No	No	No

Notes:

The mitigated scenario would implement **MM AQ-2.4** which would prohibit the use of wood burning devices (e.g., fireplaces, wood stoves) and ensure compliance with BAAQMD Regulation 6, Rule 3.

Source: CalEEMod v. 2020.4.0 and Kimley-Horn & Associates, 2022.

Criteria Pollutant Health Effects

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502). The Friant Ranch project was a 942-acre Specific Plan that involved a commercial master planned community of approximately 2,500 dwelling units and extensive commercial

supporting development. The anticipated air quality impacts resulting from this development included significant and unavoidable emissions of multiple criteria pollutants (including significant emissions of one of the primary O₃ precursors [ROG]) at levels that exceeded the daily thresholds of significance. As noted above, the project's operational emissions would exceed the BAAQMD's ROG significance threshold despite the implementation of mitigation measures, resulting in a significant and unavoidable impact. However, mitigation measures **MM AQ-2.1** through **MM AQ-2.4** are included to reduce the impact to the greatest extent possible.

The BAAQMD has set its CEQA significance thresholds based on trigger levels for the federal New Source Review (NSR) Program and BAAQMD's Regulation 2, Rule 2 for new or modified sources. The NSR Program was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based NAAQS. The NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the BAAQMD's mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

NO_x and ROG are precursor emissions that form O₃ in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so O₃ may be formed at a distance downwind from the sources. Breathing ground-level O₃ can result health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily O₃ concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that O₃ can make asthma symptoms worse and can increase sensitivity to asthma triggers.

Table 6-10: Project Buildout Operational Emissions – Mitigated shows that a large proportion of the project's ROG emissions are from mobile sources and area sources (specifically from consumer products). Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. Additionally, CARB (a branch of the California EPA) is primarily responsible for controlling pollution from motor vehicles and area sources/consumer products. The air districts must adopt rules to achieve and maintain the State and Federal AAQS within their jurisdictions.

According the BAAQMD's 2017 Clean Air Plan, the major air quality improvements achieved over the past several decades have greatly benefited public health in the Bay Area, even as the region's population, the amount of motor vehicle travel, and economic output have all grown substantially. Population exposure to unhealthy ozone levels declined dramatically. In 1986–1988, the average Bay Area resident was exposed to unhealthy ozone concentrations 213 hours

per year. Exposure to unhealthy ozone levels (ozone exceeding the state one-hour standard of 95 parts per billion) has been reduced to less than one hour per year during the 2012–2014 period, an overall reduction of 99.8 percent.⁵ Ozone levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_x emissions (an ozone precursor) from electric utilities have also decreased due to the use of cleaner fuels and renewable energy. The 2017 Clean Air Plan control strategy includes 85 control measures, reduce multiple pollutants and serve both to protect public health and to protect the climate. With continued implementation of the control measures, the 2017 Clean Air Plan projects continued reductions in emissions and ambient concentrations of ozone and PM and decreases in population exposure to the most harmful air pollutants, such as fine PM and TACs, in impacted communities.

Part of the control process of the BAAQMD's duty to greatly improve the air quality in the SFBAAB is the uniform CEQA review procedures required by BAAQMD's CEQA Air Quality Guidelines. The single threshold of significance used to assess direct project and cumulative impacts has improved air quality as evidenced by the track record of the air quality in the SFBAAB dramatically improving over the course of the past decades. As stated by the BAAQMD, the thresholds of significance are based on factual and scientific data and are therefore appropriate thresholds of significance to use for the project.

As noted in the Brief of Amicus Curiae by the South Coast Air Quality Management District (SCAQMD) in the Friant Ranch case (April 6, 2015) (Brief), the SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on how lead agencies should correlate air quality impacts with specific health outcomes. The SCAQMD discusses that it may be infeasible to quantify health risks caused by individual projects, due to various factors. It is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk and it does not necessarily mean anyone will contract cancer as a result of the project.

The Brief also cites the author of the CARB methodology, which reported that a PM_{2.5} methodology is not suited for small projects and may yield unreliable results. Similarly, SCAQMD staff does not currently know of a way to accurately quantify O₃-related health impacts caused by NO_x or ROG (VOC) emissions from relatively small projects, due to photochemistry and regional model limitations.

⁵ Bay Area Air Quality Management District, *Clean Air Plan 2017*, page 2/24, 2017.

The Brief concludes, with respect to the Friant Ranch EIR, that although it may have been technically possible to plug the data into a methodology, the results would not have been reliable or meaningful.

The Brief makes it clear that SCAQMD does not believe that there must be a quantification of a project's health risks in all CEQA documents prepared for individual projects. Any attempt to quantify the proposed Project's health risks would be considered unreliable and misleading. Also, the project does not generate anywhere near 6,620 pounds per day of NO_x or 89,190 pounds per day of ROG (VOC) emissions, which SCAQMD stated was a large enough emission to quantify O₃-related health impacts. Therefore, the project's emissions are not sufficiently high enough to use regional modeling program to correlate health effects on a basin-wide level. Notwithstanding, as previously noted, a site-specific localized impact analysis that does correlate potential project health impacts on a local level to immediately adjacent land uses is included above.

Although it may be misleading and unreliable to attempt to specifically and numerically quantify the project's health risks, this analysis provides extensive information concerning the project's potential health risks. While the project is expected to exceed the BAAQMD's numeric regional mass daily thresholds for ROG, this does not in itself constitute a significant health impact to the population adjacent to the project and within the SFBAAB.

The Project's exceedance of the BAAQMD's ROG mass emissions thresholds could contribute to the formation of ozone in the atmosphere that could potentially contribute to the SFBAAB's current ozone air quality violation, thus contributing to potential associated health effects in the region. However, ozone is not formed at the location of emission and the quantity of precursor emissions is not proportional to local ozone concentrations. The emission of ROG do not directly cause health effects; it is the resulting concentration of criteria pollutants, which is influenced by sunlight, chemical reactions, and transport (i.e., regional impacts), that are not feasible to model at the project level.⁶

In addition, current BAAQMD and CARB regulations will reduce the emissions below what is shown in **Table 6-10: Project Buildout Operational Emissions – Mitigated**. Additionally, the project would implement **MM AQ-2.5**, which would include a Transportation Demand Management (TDM) plan to reduce mobile emissions for all uses. However, due to the uncertainty in the relationship between project-level mass emissions and regional ozone formation as well as limitations with currently available technical tools, the resulting health

⁶ As noted in the San Joaquin Valley Air Pollution Control District (SJVAPCD) Amicus Curiae Brief for *Sierra Club v. County of Fresno*, the computer models used to simulate and predict and attainment date for ozone or particulate matter NAAQS are based on regional inputs, such as regional inventories of precursor pollutants (NO_x, SO_x, and VOCs) and atmospheric chemistry and meteorology. The models simulate future ozone or PM levels based on predicted changes in precursor emissions region wide. The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the NAAQS attainment date. Rather, the air district modeling and planning strategy is regional in nature and based on the extent to which all of emission-generating sources (current and future) must be controlled in order to reach attainment.

effects associated with the project cannot be identified. Given this is speculative, it is not considered a significant environmental impact.

As discussed above, neither the BAAQMD nor any other air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions. Information on health impacts related to exposure to ozone and particulate matter emissions published by the U.S. EPA and CARB have been summarized above and discussed in the Regulatory Framework section. Health studies are used by these agencies to set the Federal and State AAQS. None of the health-related information can be directly correlated to the pounds/day or tons/year of emissions estimated from a single, proposed project. Therefore, without thresholds and standards there is no way to ascertain if there is a significant environmental impact. However, mitigation measures **MM AQ-2.1** through **MM AQ-2.5** are included to reduce the impact related to air quality to the greatest extent possible.

Mitigation Measures

MM AQ-2.1 BAAQMD Basic Construction Mitigation Measures

During construction, the following BAAQMD Basic Construction Mitigation Measures air pollution control measures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

MM AQ-2.2 Off-Road Diesel-Powered Construction Equipment

Prior to issuance of any grading permits, and/or building permits (whichever occurs earliest), the project applicant shall prepare and submit a construction operations plan that includes specifications of the equipment to be used during construction to the City of Dublin. The plan shall be accompanied by a letter signed by an air quality specialist, verifying that the equipment included in the plan meets the standards set forth below.

- For all construction equipment larger than 25 horsepower operating on the site for more than two days continuously or 20 total hours, shall, at a minimum meet U.S. EPA Tier 4 Final emission standards.

The project applicant shall submit a construction operations plan prepared by the construction contractor that outlines how the contractor will achieve the measures outlined in this mitigation measure. The plan shall be submitted to the City of Dublin for review and approval prior to the issuance of any grading and/or building permits (whichever occurs earliest). The plan shall include, but not be limited to the following:

- List of activities and estimated timing.
- Equipment that would be used for each activity.
- Manufacturer's specifications for each equipment that provides the emissions level; or the manufacturer's specifications for devices that would be added to each piece of equipment to ensure the emissions level meet the thresholds in the mitigation measure.
- How the construction contractor will ensure that the measures listed are monitored.
- How the construction contractor will remedy any exceedance of the thresholds.
- How often and the method the construction contractor will use to report compliance with this mitigation measure.

MM AQ-2.3 Architectural Coating

The applicant shall require by contract specifications that the interior architectural coating (paint and primer) products used would have a volatile organic compound rating of 20 grams per liter or less while exterior architectural coating must be less than 100 grams per liter. Contract specifications shall be included in the construction documents for the project, which shall be reviewed and approved by the City of Dublin.

MM AQ-2.4 Prohibition of Wood-Burning Fireplaces

The installation of wood-burning devices shall be prohibited within the development per Bay Area Air Quality Management District Regulation 6, Rule 3. The purpose of this rule is to limit emissions of particulate matter and visible emissions from wood-burning devices used for primary heat, supplemental heat or ambiance. This prohibition shall be noted on the deed for future property owners to obey. Natural gas fireplaces are acceptable.

MM AQ-2.5 Vehicle Trip Reduction

Develop a qualifying Commute Trip Reduction (CTR)/ Transportation Demand Management (TDM) plan to reduce mobile GHG emissions for all uses. The TDM plan shall be approved by the City of Dublin prior to the issuance of building permits and incorporated into the project's Codes Covenants and Restrictions (CC&Rs). The TDM plan shall discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. The TDM Plan shall include and implement TDM Best Management Practices (BMPs) for non-residential uses. The TDM obligations shall apply for the lifetime of the project.

TDM Requirements for Non-Residential Uses:

- The Project Applicant shall consult with the local transit service provider on the need to provide infrastructure to connect the project with transit services. Evidence of compliance with this requirement may include correspondence from the local transit provider(s) regarding the potential need for installing bus turnouts, shelters, or bus stops at the site.
- BMPs that target retail employees and customers shall be described in the TDM Plan, including information regarding the direct implementing party (e.g., Project Developer, TMA, City, tenants and employers). The following BMPs shall be considered for inclusion in the TDM Plan for some or all portions of the retail development, to the extent feasible and appropriate:
 - Bicycles: Infrastructure improvements; rider encouragement program; parking, repair facilities, showers and lockers; riders guide. Short-term and long-term bicycle parking spaces shall be provided in prominent and convenient locations in all buildings.
 - Vehicles: Preferential carpool parking; flexible work schedules for carpools; transportation coordinator(s); designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles; pre-tax commuter incentives; rideshare matching services.
 - Transit: On-site shuttle services, shuttle bus stops with shelters, pedestrians path linking buildings and transit stops.
 - A website and marketing program to disseminate information on commute options; access to TMA management services.

- Pedestrian-oriented site design.

TDM Requirements for Residential Units:

- **Owner-Occupied Units.** Upon a residential dwelling being sold or offered for sale, the applicant shall notify and offer to the buyer or prospective buyer, as soon as it may be done, materials describing public transit, ridesharing, and nonmotorized commuting opportunities available in the vicinity of the project. Such information shall be transmitted no later than the close of escrow. This information shall be submitted to the City of Dublin Planning Division for review and approval, prior to the issuance of the first certificate of occupancy. The project's CC&Rs shall require this information to be disclosed no later than the close of escrow for initial and subsequent purchases.

Rental Units. Upon a residential dwelling being rented or offered for rent, the applicant shall notify and offer to the tenant or prospective tenant, materials describing public transit, ridesharing, and nonmotorized commuting opportunities in the vicinity of the development. The materials shall be approved by the City of Dublin. The materials shall be provided no later than the time the rental agreement is executed. This information shall be submitted to the City of Dublin Planning Division for review and approval, prior to the issuance of the first certificate of occupancy.

Impact AQ-3: Exposes sensitive receptors to substantial pollutant concentrations (Class III).

A sensitive receptor is defined by the BAAQMD as the following: Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas. Sensitive receptors closest to the residential project site include residences east and north of the project site.

Localized Carbon Monoxide Hotspots

The primary mobile-source criteria pollutant of local concern is carbon monoxide. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Transport of this criteria pollutant is extremely limited; CO disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. CO concentration modeling is therefore typically conducted for intersections that are projected to operate at unacceptable levels of service during peak commute hours.

The SFBAAB is designated as attainment for carbon monoxide (CO). Emissions and ambient concentrations of CO have decreased dramatically in the SFBAAB with the introduction of the

catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991.

As a result, the BAAQMD screening criteria notes that CO impacts may be determined to be less than significant if a project is consistent with the applicable congestion management plan (CMP) and would not increase traffic volumes at local intersections to more than 44,000 vehicles per hour, or 24,000 vehicles per hour for locations in heavily urban areas, where “urban canyons” formed by buildings tend to reduce air circulation.

According to the transportation analysis, the project would generate 10,983 net new trips. The project’s effects to existing vehicle distribution and travel speeds would be nominal. Therefore, the project would not involve intersections with more than 24,000 or 44,000 vehicles per hour. As a result, the project would not have the potential to create a CO hotspot and impacts would be less than significant.

Construction Fugitive Dust

Fugitive dust (PM₁₀) would be generated during construction (grading). As detailed in Impact AQ-2, the project would result in a less than significant dust impact after incorporation of BAAQMD Basic Construction Mitigation Measures required in **MM AQ-2.1**. Therefore, the project would not expose adjacent receptors to significant amounts of construction dust after incorporation of mitigation.

Toxic Air Contaminants

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known toxic air contaminants (TAC). Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. The closest sensitive receptor to the project site are the residences to the east and north of the project site. BAAQMD provides guidance for evaluating impacts from TACs in its *CEQA Air Quality Guidelines* document. As noted therein, an incremental cancer risk of greater than 10 cases per million at the Maximally Exposed Individual (MEI) will result in a significant impact. The BAAQMD considers exposure to annual PM_{2.5} concentrations that exceed 0.3 µg/m³ from a single source to be significant. The BAAQMD significance threshold for non-cancer hazards is 1.0.

Construction TAC and PM_{2.5} Health Risks

Construction-related activities would result in project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, diesel PM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. The closest sensitive receptor to the project site are the residences to the north, east and south.

CARB identified particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) as a TAC in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2003), so diesel PM is the focus of this discussion.

Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be episodic and would occur over several locations isolated from one another. Additionally, construction activities would be subject to and would comply with California regulations limiting idling to no more than five minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions. Furthermore, even during the most intense year of construction, emissions of diesel PM would be generated from different locations on the project site rather than in a single location because different types of construction activities (e.g., site preparation and building construction) would not occur at the same place at the same time.

The air dispersion modeling for the mobile source risk assessment was performed using the U.S. EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data was obtained from CARB.

Surface and upper air meteorological data from the Livermore Municipal Airport was selected as being the most representative for meteorology based on proximity to the project site. The emission sources in the model are line volume sources (comprised of smaller adjacent volume sources) for the loading dock idling areas, on-site truck circulation, and off-site routes. Heavy duty vehicle emissions were assigned a release height of 12 feet (3.66 meters), a plume height of 20.4 feet (6.22 meters). A release height of 12 feet is the average stack height for trucks and the plume height is based on U.S. EPA guidance for vehicle volume sources.

AERMOD was run to obtain the peak 1-hour and period (annual average) concentration in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at the nearby sensitive receptors. The period concentrations were used to calculate the Maximum Individual Cancer Risk (MICR), the maximum chronic HI, and the hourly concentrations were used to calculate the health impact from substances with acute non-cancer health effects. A receptor grid was placed over the project site to cover the zone of impact. Due to the size of the project site, nearby sensitive receptors were modeled with a 50-meter (164-foot) grid spacing; refer to [Appendix B](#) for modeling outputs. Risk levels were calculated using the CARB Hotspot Analysis and Reporting Program (HARP) Risk Assessment Standalone Tool (RAST). The calculations are based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, *Air Toxics Hot Spots Program Risk Assessment Guidelines* (February 2015).

Results of this assessment indicate that the maximum concentration of PM_{2.5} during construction would be 0.01 µg/m³ which is below the BAAQMD 0.3 µg/m³ significance threshold. The highest calculated carcinogenic risk from project construction is 44 per million, which is above the BAAQMD threshold of 10 in one million. Therefore, Tier 4 Final construction equipment is required to reduce cancer risk. With MM AQ-2.2 cancer risk would be 4.5 in one million. Non-cancer hazards for DPM would be 0.02 chronic hazard index and an acute hazard index of 1.96 without mitigation. Chronic hazards would be below the BAAQMD significance threshold of 1.0, however acute hazard would be above. However, with MM AQ-2.2, chronic hazard would be 0.002 and acute would be 0.21. Therefore, with mitigation construction risk levels would be less than significant.

Another potential source of TACs associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally-occurring asbestos-containing soils. The project is not located in an area designated by the State of California as likely to contain naturally-occurring asbestos (DOC 2000). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos.

Mobile Sources

Pursuant to *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, Case No. S213478, agencies are not required to analyze the CEQA impact of existing environmental conditions on a project's future users or residents, unless the proposed project risks exacerbate those environmental hazards or conditions that already exist. Nevertheless, the following mobile source health risk analysis has been prepared as an information item for land use decision making but is not a CEQA required analysis condition.

The BAAQMD *CEQA Air Quality Guidelines* recommend that projects be evaluated for community risk when they locate sensitive receptors within 1,000 feet of freeways, high traffic volume roadways (10,000 average annual daily trips or more), and/or stationary permitted sources of TACs. The project would not place sensitive receptors within 1,000-feet of the I-580 freeway (a mobile TAC source).

However, the project would locate sensitive receptors (residential dwelling units) along Tassajara Road and Dublin Boulevard, both of which have traffic in excess of 10,000 average daily trips (ADT). Tassajara Road has an estimated 26,633 ADT and Dublin Boulevard has an estimated 57,315 ADT during the future Cumulative Plus Project Scenario. The other roadways surrounding the project site are Gleason Drive with an estimated 14,480 ADT and Central Parkway with an estimated 16,230 ADT in the future Cumulative Plus Project Scenario. These roadways are all considered high volume roadways under BAAQMD standards.

These roadways were analyzed using BAAQMD's GIS mapping tool. As shown in Table 6-11: Cumulative Health Risk below, the primary contributor to the cumulative PM_{2.5} concentrations are the existing highway sources near the project area (PM_{2.5} of 0.31 µg/m³). The railway sources represent approximately 91 percent of the total concentrations and are completely unrelated to the project. Additionally, the primary contributor to the cumulative cancer risk

concentrations are the existing highway sources near the project area (cancer risk of 18.53 per million and hazard risk of 1.24). The highway sources represent approximately 99 percent of the total concentrations for cancer risk and are completely unrelated to the project.

Table 6-11: Cumulative Health Risk

Emissions Sources	PM _{2.5} (µg/m ³)	Cancer Risk (per million)	Hazard
Major Street Sources¹	0.02	1.44	0.08
Highway Sources¹	0.31	18.53	1.24
Railway Sources¹	0.00	0.71	0.00
Stationary Sources			
<i>Name of Facility</i>			
<i>Target Corporation Store #T2771</i>	0.01	0.00	0.00
<i>Safeway Inc #1932</i>	0.00	0.01	0.00
<i>Lowe's of Dublin, CA#2273</i>	0.00	4.60	0.00
<i>Aloft Hotel</i>	0.00	0.40	0.00
<i>Pleasanton Car Wash</i>	0.00	0.03	0.00
Cumulative Health Risk Values	0.34	25.72	1.32
<i>BAAQMD Cumulative Threshold</i>	<i>0.8</i>	<i>100</i>	<i>10</i>
Threshold Exceeded?	No	No	No
1. BAAQMD GIS data. Source: BAAQMD's Stationary Source Data and GIS Mapping Tools, 2022.			

Notes:

1. MEI = Maximally Exposed Individual

Source: Kimley-Horn & Associates, 2022.

Furthermore, in May 2016 the BAAQMD released the *Planning Healthy Places* guidebook that provides air quality and public health information for locations throughout the Bay Area. The BAAQMD also provides web-based interactive maps that show the location of communities and places throughout the region that are estimated to have elevated levels of fine particulates and/or TACs. The maps identify where best practices and further study should be applied. Based on the mapping, the project site is not located in a best practices or further study area.

As indicated above, the project includes the future development of residences that are located outside of the BAAQMD's recommended 1,000-foot buffer from freeways. However, residences would be located within 1,000-foot buffer of high-volume roadways. The highest cancer risk for future residences according to the BAAQMD's GIS mapping tool would be 1.91 per one million and highest PM_{2.5} would be 0.03 µg/m³. As the project design maximizes the buffer between potential TAC sources and residential units impacts associated with TACs related to the project's on-site receptors would be less-than-significant.

Off-Site Impacts

The project would not be considered a source of toxic air contaminants (TACs) that would pose a possible risk to off-site uses. The project involves the future development of a mixed-use project that would include commercial and residential uses. The project would not include stationary sources that emit TACs and would not generate a significant amount of heavy-duty truck trips (a source of diesel particulate matter [DPM]). Therefore, no impacts to surrounding receptors associated with TACs would occur.

Cumulative Health Risk Analysis

Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Worst-case PM_{2.5} concentrations and chronic hazard levels for the project operations would be well below the BAAQMD's thresholds. CEQA Guidelines 15065(a)(3) states "... 'Cumulatively considerable' means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

The project is residential and commercial and would not generate any TAC sources. Offsite mobile sources and stationary sources within a 1,000-foot radius of the project site were reviewed using BAAQMD's Stationary Source Screening Analysis Tools. There are five existing permitted stationary sources located within a 1,000-foot radius of the project site. As shown in **Table 6-11: Cumulative Health Risk**, cumulative impacts related to cancer risk and hazard would be less than cumulatively considerable and within acceptable limits. Additionally, the project would not be considered a source of toxic air contaminants (TACs) that would pose a possible risk to off-site uses. Therefore, the project would not be cumulatively considerable and cumulative impacts would be less than significant.

The incremental effect of the individual project is less than significant.⁷ Therefore, the project's cumulative impacts would be less than significant.

Impact AQ-4: Creates objectionable odors affecting a substantial number of people (Class III).

According to the BAAQMD, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The project does not include any uses identified by the BAAQMD as being associated with odors.

⁷ CEQA case law has held that any additional emissions in an impacted area does not necessarily create a significant cumulative impact, finding that "the 'one [additional] molecule rule' is not the law" (Communities for a Better Environment v. California Resources Agency (2002) 103 Cal. App. 4th 98, 120).

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause physical harm, they can still be unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to violate the BAAQMD standards.

BAAQMD enforces permit and nuisance rules to control odorous emissions from stationary sources. For instance, BAAQMD Regulation 7 (Odorous Substances) places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Regulation 7 disallows discharge of any odorous substance which causes the ambient air at or beyond the property line to be odorous and to remain odorous after dilution with four parts of odor-free air. Given these regulations, and the fact that there are no odorous emissions existing or proposed on or near the project site, there would be no impact.

6.5.4 Cumulative Impact Analysis

The geographical area for cumulative air emission impacts is the San Francisco Bay Area Air Basin, which includes Alameda County.

Impact AQ-5: Contribute to cumulatively considerable air quality impacts (Class I).

Cumulative Construction Emission Impacts

The SFBAAB is designated nonattainment for O₃, PM₁₀, and PM_{2.5} for State standards and nonattainment for O₃ and PM_{2.5} for federal standards. As discussed above, even with mitigation identified for the project, MM AQ-2.1 through AQ-2.4, the project's construction-related emissions would exceed the BAAQMD significance thresholds for NO_x but not the other three criteria pollutants, refer to Table 6-8: Construction Air Emissions.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would have cumulatively considerable impacts for NO_x. The BAAQMD recommends Basic Construction Mitigation Measures for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with BAAQMD construction-related mitigation requirements are considered to reduce cumulative impacts at a Basin-wide level. As a result, construction emissions associated with the project would result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Operational Emission Impacts

The BAAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse

air quality impacts. The BAAQMD developed the operational thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. Therefore, a project that exceeds the BAAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in **Table 6-10: Project Buildout Operational Emissions – Mitigated**, the project would result in long-term operational stationary and vehicular emissions. The operational emissions for ROG would exceed BAAQMD thresholds. As a result, operational emissions associated with the project would result in a cumulatively considerable contribution to significant cumulative air quality impacts.

With mitigation identified for the project, **MM AQ-2.1** through **AQ-2.4**, and compliance with BAAQMD rules and requirements, the cumulative impacts of the project would be reduced; however, the project's cumulative contribution to NO_x and ROG emissions would remain significant and unavoidable (Class I).

6.5.5 Level of Significance after Mitigation

Table 6-12: Summary of Impacts and Mitigation Measures – Air Quality summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to air quality.

Table 6-12: Summary of Impacts and Mitigation Measures – Air Quality

Impact	Impact Significance	Mitigation
Impact AQ-1: Conflict with implementation of San Francisco Bay Area 2017 Clean Air Plan (Class I).	Significant and Unavoidable	MM AQ-2.1: BAAQMD Basic Construction Mitigation Measures MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment MM AQ-2.3: Architectural Coating MM AQ-2.4: Wood Burning Fireplaces
Impact AQ-2: Violates air quality standard or contributes substantially to an existing or projected air quality violation (Class I).	Significant and Unavoidable	MM AQ-2.1: BAAQMD Basic Construction Mitigation Measures MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment MM AQ-2.3: Architectural Coating MM AQ-2.4: Wood Burning Fireplaces MM AQ-2.5: Vehicle Trip Reduction
Impact AQ-3: Expose sensitive receptors to substantial pollutant concentrations (Class III).	Less than Significant	None required
Impact AQ-4: Create objectionable odors (Class III).	Less than Significant	None required
Impact AQ-5: Contribute to cumulatively considerable air quality impacts. (Class I).	Significant and Unavoidable	MM AQ-2.1: BAAQMD Basic Construction Mitigation Measures MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment MM AQ-2.3: Architectural Coating MM AQ-2.4: Wood Burning Fireplaces MM AQ-2.5: Vehicle Trip Reduction

6.6 References

- Bay Area Air Quality Management District, *Planning Healthy Places*, 2016.
- Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, 2017.
- Bay Area Air Quality Management District, *Clean Air Plan*, 2017.
- Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status*, 2017.
- Bay Area Air Quality Management District, *Current Rules*, 2017.
- Bay Area Air Quality Management District, *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*, 2022.
- California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, 2018.

California Air Pollution Control Officers Association (CAPCOA), *Health Risk Assessments for Proposed Land Use Projects*, 2009.

California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2015 to 2017*, 2018.

California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005.

California Air Resources Board, *Current Air Quality Standards*, 2016.

California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, 2000.

City of Dublin. *Climate Action Plan 2030 and Beyond*, 2020.

Federal Highway Administration, *Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*, 2016.

Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, 2015.

United States Environmental Protection Agency, *National Ambient Air Quality Standards Table*, 2016.

United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants*, 2018.

United States Environmental Protection Agency, *Policy Assessment for the Review of the Lead National Ambient Air Quality Standards*, 2013.

7 Biological Resources

7.1 Introduction

This chapter describes the effects on biological resources that would be caused by implementation of the project. It addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project construction and operation. In addition, existing laws and regulations relevant to biological resources are described. In some cases, compliance with these existing laws and regulations would serve to reduce or avoid certain impacts that might otherwise occur with implementation of the project.

This chapter references the following technical reports that were prepared for the project, which can be found in [Appendix C](#):

- WRA, *Biological Resources Assessment*, 2022
- WRA, *At Dublin Development Project Rare Plant Survey Report*, 2018
- WRA, *At Dublin Development Project Wetland Delineation Report*, 2018

7.2 Scoping Issues Addressed

During the public comment scoping period for the project, specifically during the public scoping meeting, comments requesting review of impacts to burrowing owl and other special status species were raised.

7.3 Environmental Setting

This section presents information on existing biological resources conditions in the project area. The current condition and quality of biological resources was used as the baseline against which to compare potential impacts of the project.

7.3.1 Project Setting

The project site is vacant land and is generally flat with a slight slope from a higher elevation at the northerly boundary to a slightly lower elevation towards the southerly boundary. Historically, the property was used for agricultural purposes but is currently vacant (except for seasonal temporary uses). The project site is characterized by low lying native and non-native grasses that is turned (disced) periodically for the purposes of weed abatement. A small group of trees and shrubs is located near the corner of Tassajara Road and Central Parkway. No grading for development purposes has occurred to date.

7.3.2 Methodology

Literature Search and Review of Existing Data

The assessment of biological resources for the project began with a review of all available documents and species and habitat data provided by the project applicant, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and other agencies. Biological resource data sources included, but were not limited to, the following:

- CDFW California Natural Diversity Database (CNDDDB) to determine special-status plants, wildlife, and vegetation communities that have been documented within the vicinity of the project site.
- Aerial photographs, Geographic Information Systems (GIS) data, United States Geological Survey (USGS) topographic maps.
- Previously prepared reports and regional planning documents (general plan policies, Habitat Conservation Plans [HCPs], Environmental Impact Reports [EIRs], and published scientific literature).

In addition to the literature search and review of existing data, descriptions and analysis in this section are based on the Biological Resources Assessment (BRA) prepared by WRA, provided in [Appendix C](#). The methodology of the BRA is described below.

Biological Resources Assessment

On December 7, 2017, February 22 and March 19, 2018, and April 12, 2022, the project site was traversed on foot to determine: (1) plant communities present within the project site, (2) if existing conditions provided suitable habitat for any special-status plant or wildlife species, and (3) if sensitive habitats are present. All plant and wildlife species encountered were recorded and are summarized in the BRA. [Appendix C](#) provides a list of species-status species that have been documented in the vicinity and summarizes the potential for occurrence for each of these species based on observed habitat suitability, proximity of known occurrences, or the direct observation of a species.

Prior to the site visit, online soil survey data for the project area, the USGS 7.5-minute quadrangle map for Livermore, USFWS NWI data, rainfall data and WETS precipitation data, and available aerial photographs of the site were reviewed to identify potential sensitive habitats and areas for further investigation during the site visit. Following the site visit, biological communities present in the project area were classified based on existing plant community descriptions described in A Manual of California Vegetation, Online Edition (CNPS 2022; CDFW 2022). However, in some cases, it was necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

7.3.3 Biological Communities

As shown in **Figure 7-1: Biological Communities on the Project Site** there are 76.24 acres of non-sensitive ruderal habitat and 0.66 acres of sensitive seasonal wetlands.

Non-sensitive Biological Communities

Ruderal

The project site contains ruderal habitat, comprised primarily of disced and mowed areas of disturbed vegetation. Ruderal areas are primarily composed of ruderal herbaceous vegetation dominated by non-native annual species, such as slim oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), and black mustard (*Brassica nigra*). Native species, such as common fiddleneck (*Amsinckia intermedia*) and tarweed fiddleneck (*A. lycopsoides*), are also present. The project site has been disced for weed abatement, with small margins of intact ruderal vegetation along the margins and southwest of Northside Drive.

Sensitive Biological Communities

Seasonal Wetland

The 0.66 acres of seasonal wetlands occur as five separate topographic depressions and one flat-to-sloping area where seasonal inundation and/or saturation occurs during the rainy season. Four wetlands had varying levels of apparent regular disturbance, including disking and use as a parking area for vehicles.

Vegetation within these seasonal wetlands is sparse and is dominated by a mixture of non-native grasses and forbs, all of which are adapted to high levels of disturbance. Commonly observed species include Italian ryegrass (*Festuca perennis*), hyssop loosestrife (*Lythrum hyssopifolia*), and curly dock (*Rumex crispus*).

Given the highly altered and regularly disturbed nature of the project site, as well as the lack of a dominance by or characteristic presence of species associated with vernal pools, the wetlands are classified as seasonal wetlands rather than vernal pools.

City of Dublin Protected Trees

There are no trees defined as “heritage trees” under the City of Dublin Heritage Tree Ordinance present on site. There are several remnant trees located on the abandoned homestead area in the northern portion of the project site. These trees exceed 24 inches in diameter at four (4) feet six (6) inches above natural grade; however, are not species included under the definition of heritage trees.

Additionally, two coast live oak (*Quercus agrifolia*) saplings less than 24 inches in diameter are located north of Gleason Drive. At 24 inches these are too small to be included under the definition of heritage trees.

7.3.4 Special-Status Species

Special Status Plant Species

Based on a review of the resources and databases described above, 59 Statewide special-status plant species were documented in the project area. Species documented in the CNDDDB as occurring within a five-mile buffer of the project area are shown in [Figure 7-2: Special-Status Plant Species Documented within Five Miles of the Project Site](#).

Within the project site, three special-status plant species were identified or have the potential to occur, namely:

- State and Local special-status plant, **Congdon's tarplant** (*Centromadia parryi* ssp. *congdonii*); CNPS Rank 1B.1; Present
- State special-status plant, **San Joaquin spearscale** (*Extriplex joaquinana*); CNPS Rank 1B.2; Present
- State special-status plant, **Saline clover** (*Trifolium hydrophilum*); CNPS Rank 1B.2; Moderate Potential

Local rare plant species, smooth boisduvalia (*Epilobium campestre*) and woolly marbles (*Psilocarphus oregonus*) were also identified within the project site; see [Figure 7-3: Special-Status Plant Species on the Project Site](#). A small number of smooth boisduvalia individuals were observed in a flat, mesic, grassy area located northwest of the intersection of Dublin Boulevard and Brannigan Street. A small number of woolly marbles individuals were observed in the same flat, mesic, grassy area northwest of the intersection of Dublin Boulevard and Brannigan Street.

Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*)

Congdon's tarplant is an annual herb in the composite family (Asteraceae) that typically blooms from May to October. It often grows in alkaline soils, sometimes described as heavy white clay, in valley and foothill grassland habitats ranging from 0 to 755 feet (0 to 230 meters) in elevation.

As shown in [Figure 7-3: Special-Status Plant Species on the Project Site](#), 371 individuals of Congdon's tarplant were observed in the seasonal wetland in the southeastern corner, as well as in scattered locations along the eastern boundary of the project site.

San Joaquin spearscale (*Extriplex joaquinana*)

San Joaquin spearscale is an annual herb in the goosefoot family (Chenopodiaceae) that typically blooms from April to October. It often grows in seasonal alkali sink scrub and wetlands in chenopod scrub, alkali meadow, and valley and foothill grassland habitat at elevations ranging from 0 to 2,740 feet. San Joaquin spearscale is known to occur throughout northern California.

As shown in [Figure 7-3: Special-Status Plant Species on the Project Site](#), approximately 345 individuals of San Joaquin spearscale were observed in and near the small seasonal wetland in the southeastern portion of the project area, just southwest of the intersection of Dublin Boulevard and Brannigan Street.

Saline clover (*Trifolium hydrophilum*)

Saline clover is an annual herb in the pea family (*Fabaceae*) that typically blooms from April to June. It generally grows in mesic, alkali sites in marsh, swamp, valley and foothill grassland, and vernal pool habitat at elevations ranging from 0 to 980 feet. Saline clover is also known to occur throughout northern California.

No occurrence of saline clover was observed during the site visit, however there were two CNDDB records found in the project area, and five CCH records in Alameda County. The nearest known occurrence is from May 2002, approximately 0.5 mile east of the project site, which may now be absent. The most recent documented occurrence is from April 2006, in the Springtown area, seven miles east of the project site.

Saline clover has a moderate potential to occur in the project site due to the presence of seasonally inundated depressions and alkaline substrate and the fact that this species has been documented near the project site in disced conditions.

Special Status Wildlife Species

Based on a review of the resources and databases described above, 38 special-status wildlife species were documented in the project area. Of these, 14 species were documented in the CNDDB (CDFW, 2022) as occurring within a five-mile buffer of the project site as shown in [Figure 7-4: Special-Status Wildlife Species within Five Miles of the Project Site](#). Three special-status wildlife species were observed or were considered to have moderate or high potential to occur in the project site and are discussed below.

Within the project site, three special-status wildlife species were identified as having the potential to occur, namely:

- **Western burrowing owl** (*Athene cunicularia*); CDFW Species of Special Concern; USFWS Bird of Conservation Concern; High Potential
- **Loggerhead shrike** (*Lanius ludovicianus*); CDFW Species of Special Concern; USFWS Bird of Conservation Concern; Moderate Potential
- **White-tailed kite** (*Elanus leucurus*); CDFW Fully Protected Species; High Potential

Western burrowing owl (*Athene cunicularia*)

Burrowing owls typically favor flat, open grassland or gentle slopes and sparse shrubland ecosystems. These owls prefer annual or perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. This species is dependent on burrowing mammals to

provide the burrows that are characteristically used for shelter and nesting, and in northern California is typically found in close association with California ground squirrels (*Spermophilus beecheyi*). Manmade substrates, such as pipes or debris piles, may also be occupied in place of burrows. Burrowing owls exhibit high site fidelity.

Burrowing owls were documented within the project area (CNDDDB occurrence numbers 671 and 2066) in 2004, 2006, 2009, and 2020. During site visits, ground squirrels and ground squirrel burrow complexes were observed throughout the project area. In addition, multiple debris piles were present within the project area, which may provide additional nesting habitat for the species. Vegetation height within the project area is variable and in some areas may be suitable for the species throughout the year, including during nesting season (February 1 – August 31). Although no burrowing owls were observed on the project site during site visits, due to the presence of suitable nesting and foraging habitat, as well as previous occurrences of burrowing owl within the project area, the species has high potential to occur.

Loggerhead shrike (*Lanius ludovicianus*)

Loggerhead shrike is a year-round resident or winter visitor in lowlands and foothills throughout California. This species is associated with open country with short vegetation and scattered trees, shrubs, fences, utility lines, and/or other perches. Although they are songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation and barbed wire fences.

The loggerhead shrike nests in trees and large shrubs; nests are usually placed 3 to 10 feet off the ground. The trees located in the northwestern portion of the site provide suitable habitat to support nesting by this species. Grasslands within the project area may also provide sufficient area to support foraging by the species. While the project area is surrounded by development, due to the presence of potentially suitable nesting and foraging habitat, this species has moderate potential to occur.

White-tailed kite (*Elanus leucurus*)

White-tailed kite is a resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities. Nests are constructed mostly of twigs and are placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall. This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

The Project Area contains open habitat for foraging by this species, as well as shrubs and trees suitable for nesting. A white-tailed kite was observed foraging during the December 7, 2017, site visit. White-tailed kite has a high potential to occur.

Special-Status Wildlife Species Unlikely to Occur within the Project Site

As described in the BRA, six federally-listed wildlife species have been documented in the vicinity, but are unlikely to inhabit the project site. These are California Red-Legged Frog (*Rana draytonii*), California Tiger Salamander (*Ambystoma californiense*), San Joaquin kit fox (*Vulpes macrotis*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), longhorn fairy shrimp (*Branchinecta longiantenna*), and Callippe silverspot butterfly (*Speyeria callippe callippe*).

7.3.5 Critical Habitat

The project site is not located within any units designated as critical habitat according to the Federal Endangered Species Act (described below).

7.3.6 Wildlife Movement Corridor

The project site does not fall within any identified wildlife corridors or natural habitat blocks. The project site is surrounded by roadways, two of which are multi-lane roadways. However, there is greater than one mile of residential and commercial development separating the project site from the vacant lots, preventing dispersal into the project site.

7.4 Applicable Regulations, Plans, and Standards

7.4.1 Federal

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) provisions protect federally listed threatened and endangered species and their habitats from unlawful take and ensure that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Under the ESA, “take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct.” USFWS regulations define harm to mean “an act which actually kills or injures wildlife.” Such an act “may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering” (50 CFR § 17.3).

Critical habitat is defined in Section 3(5)(A) of the ESA as “(i) the specific areas within the geographical area occupied by the species on which are found those physical or biological features (I) essential to the conservation of the species, and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species upon a determination by the Secretary of Commerce or the Secretary of the Interior (Secretary) that such areas are essential for the conservation of the species.” The effects analyses for designated critical habitat must consider the role of the critical habitat in both the continued survival and the eventual recovery (i.e., the conservation) of the species in question, consistent with the recent Ninth Circuit judicial opinion, Gifford Pinchot Task Force v. United States Fish and Wildlife Service. Activities that may result in “take” of individuals are regulated by the USFWS. The USFWS produced an updated list of candidate species December

2, 2016 (72 FR 69034). Candidate species are not afforded any legal protection under ESA; however, candidate species typically receive special attention from federal and State agencies during the environmental review process.

Waters of the United States

Areas meeting the regulatory definition of “Waters of the U.S.” (Jurisdictional Waters) are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as “Waters of the U.S.,” tributaries of waters otherwise defined as “Waters of the U.S.,” the territorial seas, and wetlands (termed Special Aquatic Sites) adjacent to “Waters of the U.S.” (33 CFR, Part 328, Section 328.3).

Construction activities within jurisdictional waters are regulated by USACE. The placement of fill into such waters must comply with permit requirements of USACE. No USACE permit would be effective in the absence of State water quality certification pursuant to Section 401 of the Clean Water Act. As a part of the permit process USACE works directly with USFWS to assess project impacts on biological resources.

Migratory Bird Treaty Act

Raptors (e.g. eagles, hawks, and owls) and their nests are protected under both Federal and State regulations. The federal Migratory Bird Treaty Act (MBTA) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary. This act encompasses whole birds, parts of birds, and bird nests and eggs.

7.4.2 State

California Endangered Species Act

Provisions of California Endangered Species Act (CESA) protect State-listed Threatened and Endangered species. CDFW regulates activities that may result in “take” of individuals (“take” means “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”). Habitat degradation or modification is not expressly included in the definition of “take” under the California Department of Fish & Wildlife (CDFW) Code. Additionally, the CDFW Code contains lists of vertebrate species designated as “fully protected” (§§ 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], 5515 [fish]). Such species may not be taken or possessed.

In addition to federal and State-listed species, CDFW also has produced a list of Species of Special Concern to serve as a “watch list.” Species on this list are of limited distribution or the extent of their habitats has been reduced substantially, such that the threat to their populations may be imminent. Species of Special Concern may receive special attention during environmental review, but they do not have statutory protection.

Birds of prey are protected under the CDFG Code. Section 3503.5 states it is “unlawful to take, possess, or destroy any birds of prey (in the order Falconiformes or Strigiformes) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto.” Construction-related disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by CDFW. Under Sections 3503 and 3503.5 of the State Fish and Wildlife Code, activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory nongame bird as designated in the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to CDFG Code Section 3800 are prohibited.

Waters of the State

The State Water Resources Control Board (SWRCB) is the State agency (together with the Regional Water Quality Control Boards [RWQCB]) charged with implementing water quality certification in California. The project falls under the jurisdiction of the San Francisco Bay RWQCB.

The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The SWRCB and nine RWQCB protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*.

The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Clean Water Act permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

Fish and Game Code (Sections 2050 through 2098)

Sections 2050 through 2098 of the California Fish and Game Code (CFG) outline the protection provided to California’s rare, endangered, and threatened species. Section 2080 of the CFG prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for state-listed species. Also, the Native Plant Protection Act of 1977 (FGC Section 1900, et seq.) gives the CDFW authority to designate state endangered, threatened, and rare plants and provides specific protection measures for designated populations.

The CDFW has also identified many “Species of Special Concern”. Species with this status have habitats that have been reduced substantially, such that their populations may be threatened. These populations are monitored and may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA and thereby warrant specific protection measures.

Sensitive species, which would qualify for listing, but are not currently listed, are also given protection under CEQA. The CEQA Guidelines Section 15065 (“Mandatory Findings of Significance”) identifies a substantial reduction in numbers of a rare or endangered species as a significant effect. CEQA Guidelines Section 15380 (“Rare or Endangered Species”) provides for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the California Rare Plant Ranking (CRPR) system lists 1A, 1B, and 2 would typically be considered under CEQA.

7.4.3 Local

City of Dublin General Plan

The City of Dublin’s General Plan contains the following policies associated with biological resources that are relevant to the project:

Guiding Policy 7.2.1.A.1: Protect riparian vegetation as a protective buffer for stream quality and for its value as a habitat and aesthetic resource.

Guiding Policy 7.2.1.A.2: Promote access to stream corridors for passive recreational use and to allow stream maintenance and improvements as necessary, while respecting the privacy of owners of property abutting stream corridors.

Guiding Policy 7.3.1.A.1: Maintain natural hydrologic systems.

Guiding Policy 7.4.1.A.1: Protect oak woodlands.

Eastern Dublin Specific Plan

The City of Dublin’s Eastern Dublin Specific Plan contains the following policies and programs associated with biological resources that are relevant to the project:

Policy 6-15: Avoid development and potentially destructive activities in areas with high-value habitat including:

- northern riparian forest
- arroyo willow riparian woodland
- freshwater marsh

Exceptions may only be granted where an owner's reasonable beneficial use of the land cannot be otherwise provided.

Policy 6-16: To ensure long-term protection, high-value habitat areas either should be dedicated as public open space or restricted from potentially harmful development and activities with deed restrictions and design standards.

Policy 6-17: Impacts to sensitive wildlife species that occur in the planning area will be avoided wherever possible. Mitigation programs will be required as necessary to reduce or eliminate impacts on special status species.

Policy 6-21: Direct disturbance or removal of trees or native vegetation cover should be minimized and should be restricted to those areas actually designated for the construction of improvements.

Policy 6-22: All areas of disturbance should be revegetated as quickly as possible to prevent erosion. Native trees (preferably those species already on site), shrubs, herbs, and grasses should be used for revegetation of areas to remain as natural open space. The introduction of non-native plant species should be avoided.

Program 6K: The City of Dublin shall establish and maintain a liaison with resource management agencies (i.e., California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers) for the purpose of monitoring compliance with specific plan policies. These agencies should be consulted and involved throughout the planning and development process of individual properties in order to avoid violations of state and federal regulations and ensure that specific issues and concerns are recognized and addressed.

Program 6L: The City shall require development applicants to conduct a pre-construction survey within 60 days prior to habitat modification (clearing construction and road site, etc.) to verify the presence or absence of sensitive species, especially the San Joaquin kit fox, nesting raptors, the red-legged frog, western pond turtles, the California tiger salamander, and other species of special concern.

Program 6N: The use of rodenticides and herbicides within the project area should be restricted to avoid impacts on wildlife. The City shall require any poisoning programs to be done in cooperation with and under supervision of the Alameda County Department of Agriculture. Herbicides should be used only selectively within the project area, should be carefully applied in accordance with the manufacturer's instructions, and used only for control of non-native pest plant species.

City of Dublin Heritage Tree Ordinance

The City of Dublin Municipal Code Chapter 5.60 regulates the preservation of heritage trees through its development review and permit approval process. Sections 5.60.080 to 5.60.100 includes tree protection regulations. Heritage trees are defined as:

Any oak, bay, cypress, maple, redwood, buckeye and sycamore tree having a trunk or main stem of twenty-four (24) inches or more in diameter at four (4) feet six (6) inches above natural grade; a tree required to be preserved as part of an approved development plan, zoning permit,

use permit, site development review of subdivision map; or a tree required to be planted as a replacement for an unlawfully removed tree.

A tree permit is required for the removal of any heritage tree as defined above on public or private property. Furthermore, the City may require additional conditions barring the issuance of a tree removal permit including that one (1) or more replacement trees be planted of a designated species, size, and location.

East Alameda County Conservation Strategy

The project site is in Conservation Zone 3 (CZ-3) of the East Alameda County Conservation Strategy (EACCS). The EACCS is intended to provide effective framework to protect, enhance, and restore natural resources. Conservation priorities are described as guidelines to protect the resources known to occur in the conservation zones. Relevant policies for CZ-3 are:

- Protection of known occurrences of San Joaquin spearscale (*Extriplex joaquinana*) and surveys of other potential habitat
- Protection of known occurrences of Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*) and surveys of other potential habitat
- Protection of known California tiger salamander (CTS; *Ambystoma californiense*) and California red-legged frog (CRLF; *Rana draytonii*) breeding habitat, sufficient upland habitat surrounding those sites, and connections between breeding and upland habitat
- Protection of CTS and CRLF critical habitat

7.4.4 Other Applicable Regulations, Plans, and Standards

California Native Plant Society

The mission of the California Native Plant Society (CNPS) Rare Plant Program is to develop current, accurate information on the distribution, ecology, and conservation status of California's rare and endangered plants, and to use this information to promote science-based plant conservation in California. Once a species has been identified as being of potential conservation concern, it is put through an extensive review process. Once a species has gone through the review process, information on all aspects of the species (listing status, habitat, distribution, threats, etc.) are recorded on the online CNPS Inventory. The program currently recognizes more than 2,300 plant taxa (species, subspecies and varieties) as rare or endangered in California (CNPS, 2022).

Vascular plants listed as rare or endangered by the CNPS, but which might not have designated status under State endangered species legislation, are defined as follows:

List 1A – Plants considered by the CNPS to be extinct in California

List 1B – Plants rare, threatened, or endangered in California and elsewhere

List 2 – Plants rare, threatened, or endangered in California, but more numerous elsewhere

List 3 – Plants about which we need more information – a review list

List 4 – Plants of limited distribution – a watch list

In addition to the list designations above, the CNPS adds a Threat Rank as an extension added onto the CNPS List and designates the level of endangerment by a 1 to 3 ranking, with 1 being the most endangered and 3 being the least endangered and are described as follows:

0.1 – Seriously threatened in California (high degree/immediacy of threat)

0.2 – Fairly threatened in California (moderate degree/immediacy of threat)

0.3 – Not very threatened in California (low degree/immediacy of threats or no current threats known)

The combined definition and Threat Rank (such as 1B.1) provides an overall classification of the species.

7.5 Environmental Impacts and Mitigation Measures

7.5.1 Significance Criteria

The following significance criteria for aesthetics were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address Lead Agency requirements and the full range of potential impacts related to this project.

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria:

- 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 CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marshes, vernal pools, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances.
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP.

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

7.5.2 Summary of No and/or Beneficial Impacts

Habitat Conservation Plan, Natural Communities Conservation Plan, or Other Approved Local, Regional, or State Plan

There are no adopted Habitat Conservation or Natural Community Conservation Plans applicable to the project site and therefore there would be no impacts.

Tree Preservation Policy

No protected trees are present on the project site, therefore, there would be no impacts.

7.5.3 Impacts of the Proposed Project

Impact BIO-1: Have a substantial adverse effect on special-status plant and wildlife species (Class II).

Three special-status plant species and three special-status wildlife species have a moderate or high potential to occur within the project site.

Special-Status Plant Species

Of the 59 statewide special-status plant species known to occur in the project area, Congdon's tarplant, San Joaquin spearscale, and the locally rare species needle microseris, smooth boisduvalia, and wooly marbles were observed within the project area. In addition saline clover has moderate potential to occur in the project area, but site visits completed to date were not timed to coincide with the blooming period for this species. Most of the species found in the review of background literature occur in high-quality vernal pool habitat, in different plant communities than those present in the project area, often at higher elevations, or in high-quality grassland habitat. Because of the history of disturbance and change in hydrologic

regime, the grassland and potential seasonal wetlands in the project site are likely too low in quality to support other special-status plant species.

The proposed project would have a significant impact on Congdon's tarplant, San Joaquin spearscale, and needle microseris. Impacts could occur through direct removal of populations through grading and fill placement, changed land management practices in occupied areas following construction, changes in hydrology, and reduction of populations below viable sizes to sustain on-site occurrences. These are potentially significant impacts. Smooth boisduvalia and wooly marbles were observed as isolated individuals (two and one individual observed, respectively) within the project area. Given the small number of individuals observed, these occurrences do not represent viable long-term populations, and impacts resulting from the project are less than significant.

Special-status plant surveys will be required prior to the start of construction to confirm the presence or absence of any special plant species (**MM BIO-1.1: Special-Status Plant Surveys**). For special status plant species occurring within the project area, **MM BIO-1.2: Special-Status Plants Avoidance and Minimization** would avoid or minimize impacts to these special status plant species to a less-than-significant level (Class II)

Special-Status Wildlife Species

Of the 38 special-status wildlife species known to occur in the project area, three were determined to have a high to moderate potential to occur on the project site, namely western burrowing owl, loggerhead shrike, and white-tailed kite. Loggerhead shrike and white-tailed kite are also described below as nesting birds.

Habitat suitability for other grassland-associated species in the project site has been reduced by repeated discing, surrounding development, and major roads acting as dispersal barriers. These factors have also dramatically reduced or eliminated the potential for riparian and aquatic species to occur on the project site. Similarly, all seasonal wetland habitat suitable for vernal pool crustaceans have been eliminated through repeated discing. Bats are also unlikely to roost within the project site, due to the lack of suitable thermal conditions and roost structures.

Potential impacts to the three special-status wildlife species with a high to moderate potential to occur on the project site are discussed below.

Western Burrowing Owl

Burrowing owl has been documented within the project site and there is a high potential for this species to inhabit ground squirrel burrows present on-site. As determined during the site survey, the project site is not currently inhabited by this species, however, there still is the continued potential to support this species.

Project activities, including vegetation removal and ground disturbance, may affect this species by causing auditory, vibratory, and/or visual disturbance of a sufficient level to cause

abandonment of the site or active nests, or by removing foraging habitat or access to burrows, which are required to support nesting. This would result in a potentially significant impact under CEQA. Implementation of **MM BIO-1.3: Burrowing Owl Avoidance and Exclusion Measures** would reduce this potential impact to a less-than-significant level (Class II).

Nesting Birds

The project has the potential to impact special-status and non-special-status native nesting birds (i.e., loggerhead shrike and white-tailed kites) protected by the Migratory Bird Treaty Act (MBTA) and/or California Fish and Game Code (CFGF). Baseline protections for most native birds under federal law and state codes include active nests (those with eggs or young).

Recently, the U.S. Department of the Interior issued guidance clarifying that the MBTA only applies to intentional/deliberate killing, harm, or collection of covered species (including active nests). According to the guidance, unintentional impacts to birds/nests that occur within the context of otherwise lawful activities are not violations of the MBTA. However, ambiguity remains regarding application of the CFGF, as well as the extent to which minimization and avoidance measures are still required under the MBTA. Therefore, avoidance of nesting birds is considered a “best practice” in the San Francisco Bay region and avoids potential enforcement action by the CDFW. Nesting bird pre-construction survey obligations are a common component of various permits and authorizations, including CEQA documents and even local grading permits, and as such may be deemed applicable to project activities within the project area.

Project activities, such as vegetation removal and ground disturbance associated with development, would have the potential to affect these species by causing direct mortality of eggs or young, or by causing auditory, vibratory, and/or visual disturbance of a sufficient level to cause abandonment of an active nest. If project activities occur during the nesting season, which extends from February 1 through August 31, nests of both special-status and non-special-status native birds could be impacted by construction and other ground disturbing activities. Implementation of **MM BIO-1.4: Nesting Bird Avoidance Measures** would reduce this potential impact to a less-than-significant level (Class II).

Mitigation for Impact BIO-1

MM BIO-1.1: Special Status Plant Surveys

Prior to any vegetation removal or ground-disturbing activities, a focused survey shall be conducted to determine the presence of any special-status plant species with potential to occur within the project area. Surveys shall be conducted in accordance with the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. These guidelines require special-status plant surveys to be conducted at the proper time of year when rare or endangered species are both “evident” and identifiable. Field surveys shall be scheduled to coincide with known blooming periods, and/or during periods of physiological development that are necessary to identify the plant species of concern. If no

special-status plant species are found, then the project will not have any impacts to the species and no additional mitigation measures are necessary. If any of the species are found on-site and cannot be avoided, implementation of **MM BIO-1.2: Special-Status Plants Avoidance and Mitigation** shall be required.

MM BIO-1.2: Special-Status Plants Avoidance and Mitigation

Prior to obtaining the first site grading, building or other permit for development activities involving ground disturbance, the project applicant shall prepare the documentation acceptable to the Community Development Department that demonstrates compliance with the following:

1. If the survey determines that Congdon's tarplant, San Joaquin spearscale, or other special-status species are present within or adjacent to the project site, direct and indirect impacts of the project on the species shall be avoided where feasible through the establishment of activity exclusion zones, where no ground-disturbing activities shall take place, including construction of new facilities, construction staging, or other temporary work areas. Activity exclusion zones for special-status plant species shall be established prior to construction activities around each occupied habitat site, the boundaries of which shall be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones shall not be required if no construction-related disturbances would occur within 250 feet of the areas supporting rare plant species populations.
2. If exclusion zones and avoidance of impacts on Congdon's tarplant or other special-status species within the project area are not feasible, then the loss of individuals or occupied habitat of special-status plants shall be compensated for through the acquisition, protection, and subsequent management of other existing occurrences. Before the implementation of compensation measures, the project's applicant shall provide detailed information to the CDFW and Lead Agency on the quality of preserved habitat, location of the preserved occurrences, provisions for protecting and managing the areas, the responsible parties involved, and other pertinent information that demonstrates that the compensation population will be properly preserved and managed. A mitigation plan identifying appropriate mitigation ratios at a minimum ratio of 1:1 [one preserved acre for each impacted acre] to ensure no net loss of acreage shall be developed in consultation with CDFW and approved by the City prior to the commencement of any activities that would impact Congdon's tarplant or other species with potential to occur within the project area. A mitigation plan may include but is not limited to the following: the acquisition of off-site mitigation areas presently supporting the Congdon's tarplant or other special-status species, purchase of credits in a mitigation bank that is approved to sell credits for special-status plants, or payment of in-lieu fees to a public agency or conservation organization (e.g., a local land trust) for the preservation and management of existing populations of special-status plants.

MM BIO-1.3: Burrowing Owl Avoidance, Exclusion and Required Measures

Prior to obtaining the first site grading, building or other permit for development activities involving ground disturbance, the project applicant shall prepare the documentation acceptable to the Community Development Department that demonstrates compliance with the following:

Mitigate for Loss of Burrowing Owl Habitat

The majority of project site, with the exception of delineated wetlands, developed areas, and areas with tree cover, has been determined to potentially provide habitat or foraging areas for burrowing owl. Therefore, the project applicant shall implement compensatory mitigation for loss of owl habitat in accordance with the standards set forth in the Required Mitigation Plan section below.

Additional measures below will avoid direct impacts to individuals that may occupy the site during construction and implementation of the project.

Conduct a Burrowing Owl Survey

Prior to the first ground-disturbing activities, the project applicant shall retain a qualified biologist to conduct two pre-construction surveys for the Western burrowing owl on the project site.

The first survey shall be conducted no more than 14 days prior to ground-disturbing activities and the second survey within 48 hours of initial ground disturbance. The surveys shall be conducted in accordance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation. If the surveys determine owls are present, then the measures set forth below shall be followed.

Implement Avoidance Measures

If direct impacts to owls can be avoided, prior to the first ground-disturbing activities, the project applicant shall implement the following avoidance measures during all phases of construction to reduce or eliminate potential impacts to California burrowing owls.

- A pre-construction survey shall be performed prior to start of ground disturbance activities. This survey will occur regardless of the time of year, as burrowing owls may use the project site during the non-nesting season. The survey shall be performed according to the standards set forth by the Staff Report for Burrowing Owl Mitigation.
- The project site should be managed to prevent burrowing owl from occupying the site prior to any project activities
- All suitable burrows should be closed by hand once it has been determined that the burrow is unoccupied.
- Maintenance of the property to ensure burrows are not rebuilt will be necessary throughout the year to preclude the presence of burrowing owl and suitable burrowing owl habitat. Maintenance should occur approximately every 8 weeks, and burrows

should be inspected prior to closure to ensure no burrowing owl are present. The frequency of burrow closure may be adjusted based upon ground squirrel and burrow reestablishment progress.

- The debris within the project site should be removed.
- If discing is chosen as a preferred method for burrow maintenance, it is recommended that any sensitive biological resources (populations of rare plants, wetland boundaries and any active bird nests, etc.) be flagged by a qualified biologist and avoided.

Conduct Burrow Exclusion

If avoidance of burrowing owl or their burrows is not possible, prior to the first ground-disturbing activities, the project applicant, in consultation with the CDFW, shall prepare a Burrowing Owl Relocation Plan as indicated and following the CDFW 2012 Staff Report on Burrowing Owl Mitigation. Monitoring of the excluded owls shall be carried out as per the California Department of Fish and Wildlife 2012 Staff Report.

Required Mitigation Plan

The project applicant shall consult with the CDFW and develop a detailed mitigation plan that shall include replacement of impacted habitat, number of burrows, and burrowing owl at a ratio approved by CDFW and in compliance with the requirements set forth in Appendix A of the CDFW 2012 Staff Report on Burrowing Owl Mitigation. Mitigation shall at minimum preserve similar quality habitat at a 1:1 ratio [one preserved acre for each impacted acre] within the boundaries of the East Alameda County Conservation Strategy. Mitigation areas shall be permanently preserved by a conservation easement held by a third party organization dedicated to ecological stewardship. The plan shall be reviewed and approved by CDFW and the City, and the conservation easement executed prior to the first ground-disturbing activities.

The project applicant shall consult with the CDFW and develop a detailed mitigation plan that shall include replacement of impacted habitat, number of burrows, and burrowing owl at a ratio approved by CDFW to ensure no net loss of species. The mitigation plan shall comply with the requirements set forth in Appendix A of the CDFW 2012 Staff Report on Burrowing Owl Mitigation and the plan shall be reviewed and approved by CDFW and the City prior to the first ground-disturbing activities.

MM BIO-1.4: Nesting Bird Avoidance Measures

Prior to grading or development activities from February 1 to August 31, the applicant shall prepare the documentation acceptable to the Community Development Department that demonstrates compliance with the following:

Pre-construction Breeding Bird Surveys

No more than 14 days prior to initial ground disturbance and vegetation removal during the nesting season (February 1 to August 31), the project applicant shall retain a qualified biologist

to perform pre-construction breeding bird surveys. If any nests are found, they shall be flagged and protected with a suitable buffer, depending on the species. Buffer distance may vary based on species and conditions, but is typically at least 50 feet, and up to 250 feet for raptors. No construction shall occur within this buffer until the qualified biologist has confirmed that the young have fledged the nest.

As used in this measure, “suitable” means the distance a qualified biologist determines is necessary to ensure no disturbance to nesting. The buffer distance is measured as the straight-line distance between an active nest and the activity, taking both horizontal and vertical distance into account. This mitigation measure does not apply to ground disturbance and vegetation removal activities that occur outside of the nesting season (September 1 to January 31).

Impact BIO-2: Have a substantial adverse effect on sensitive natural communities or riparian habitat (Class III).

As shown in **Table 7-1: Summary of Biological Communities in Project Area**, the project site contains 76.24 acres of non-sensitive ruderal habitat comprised primarily of disced and mowed areas of disturbed vegetation. These biological communities are not considered sensitive natural communities or riparian habitat, and therefore impacts would be less than significant (Class III).

Impact BIO-3: Have a substantial adverse effect on wetlands or jurisdictional features (Class II).

Development of the project site as proposed would result in direct and permanent impacts to 0.66 acre of seasonal wetlands. The direct loss of these wetland features is considered a potentially significant impact under CEQA. These wetlands are likely within the jurisdiction of the Corps under Section 404 of the CWA and the RWQCB under Section 401 of the CWA and the Porter-Cologne Act. Implementation of **MM BIO-3.1: Wetland Mitigation Plan** would reduce this potentially significant impact to wetlands to a less-than-significant level (Class II).

Mitigation for Impact BIO-3

MM BIO-3.1 Wetland Mitigation Plan

Prior to obtaining the first site grading, building or other permit for development activities involving ground disturbance, the project applicant shall prepare the documentation acceptable to the Community Development Department that demonstrates compliance with the following:

The project applicant shall acquire the appropriate applicable permit(s) (e.g. Section 404, Section 401, Porter-Cologne) from the respective regulating agency(s) (i.e. USACE and/or RWQCB). A wetland mitigation plan shall be prepared that will establish suitable compensatory mitigation based on the concept of no net loss of wetland habitat values or acreages, to the satisfaction of the regulatory agencies.

The wetland mitigation plan shall include measures for avoidance, minimization and compensation for wetland impacts. Avoidance and minimization measures may include the designation of buffers around wetland features to be avoided or project design measures. Compensation measures shall include the preservation and/or creation of wetlands or other waters. The final mitigation ratio (the amount of wetlands and other water created or preserved compared to the amount impacted) shall be determined by the applicable resource agency(s) and result in no net loss of wetland habitat value or acreages. The wetland mitigation plan shall include the following:

1. Description of wetland types and their expected functions and values;
2. Performance standards and monitoring protocol to ensure the success of the mitigation wetlands over a period of time to be determined by the resource agencies;
3. Engineering plans showing the location, size and configuration of wetlands to be created or preserved;
4. An implementation schedule showing the construction or preservation of mitigation areas shall commence prior to or concurrently with the initiation of construction; and
5. A description of legal protection of the preserved wetlands (such as dedication of fee title, conservation easement and/or an endowment held by an approved conservation organization, government agency or mitigation bank).

Impact BIO-4: Have a substantial adverse effect on wildlife movement. (Class III).

The project site is surrounded on four sides by roadways which create an anthropogenic barrier to dispersal around the project site and precludes the primary function of a habitat corridor, to link two separated but occupied habitats. Therefore, given that the project site is bounded by urban development, the project site does not function as a wildlife corridor connecting two or more areas of occupied habitat, and impacts would be less than significant.

Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances (Class III).

Heritage Tree Ordinance

The project site does not contain any oak, bay, cypress, maple, redwood, buckeye or sycamore trees that are 24 inches in diameter as measured 4.5 feet above natural grade. Therefore, the project would not be subject to the City's Heritage Tree Ordinance and no significant impacts would occur.

East Alameda County Conservation Strategy

The project site is in Conservation Zone 3 (CZ-3) of the EACCS. The EACCS is a guidance

document that is used by the City for public projects, but compliance is not mandated for private development as it is not an adopted or approved plan that requires a consistency determination under CEQA. Therefore, no conflicts would occur and impacts would be less than significant.

7.5.4 Cumulative Impact Analysis

The geographic extent for the analysis of cumulative impacts related to biological resources includes the City of Dublin, which contains suitable and occupied habitat of Congdon's tarplant, San Joaquin spearscale, Saline clover, locally rare plant species, Western Burrowing Owl, Loggerhead shrike, and White-tailed kite. However, based on professional judgement and field surveys, the project site does not support core, critical, or unique populations essential to recovery and long-term survival of these species.

Impact BIO-6: Contribute to cumulatively considerable impacts on biological resources (Class II).

As stated above, the project would not result in a net loss of riparian habitat and would not result in a loss of any heritage trees.

The project would affect 0.66 acres of seasonal wetlands, which would considerably contribute to the significant cumulative biological impacts associated with past, present, and reasonably future projects. Implementation of **MM BIO-3.1** would reduce the project's contribution to less-than-cumulatively considerable.

The proposed project would have potentially significant impacts related the loss of potential habitat for special-status species, including Congdon's tarplant, San Joaquin spearscale, Saline clover, locally rare plant species, Western Burrowing Owl, Loggerhead shrike, and White-tailed kite. Implementation of **MM BIO-1.1**, **MM BIO-1.2**, and **MM BIO-1.3** would reduce these impacts to less-than-significant levels.

Project-related biological impacts are considered and mitigated consistent with local, state and federal regulations, which includes compliance with mitigation for loss of burrowing owl habitat and wetlands. Although past, present, and reasonably foreseeable future projects may result in impacts to special-status plants and special-status wildlife, such impacts would be site-specific and could be mitigated through adherence to similar standard mitigation. The required mitigation would reduce the project's contribution to any significant cumulative impact on wetlands these species and western burrowing owl habitat to less than cumulatively considerable. As such, cumulative impacts to special-species plants and wildlife species would be less than significant.

7.5.5 Level of Significance after Mitigation

Table 7-1: Summary of Impacts and Mitigation Measures – Biological Resources summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to biological resources.

Table 7-1: Summary of Impacts and Mitigation Measures – Biological Resources

Impact	Impact Significance	Mitigation
Impact BIO-1: Have a substantial adverse effect on special-status plant and wildlife species (Class II).	Less than Significant with Mitigation	MM BIO-1.1: Special Status Plant Surveys MM BIO-1.2: Special-Status Plants Avoidance and Mitigation MM BIO-1.3: Burrowing Owl Avoidance and Exclusion Measures MM BIO-1.4: Nesting Bird Avoidance Measures
Impact BIO-2: Have a substantial adverse effect on sensitive natural communities or riparian habitat (Class III).	Less than Significant	None required
Impact BIO-3: Have a substantial adverse effect on wetlands or jurisdictional features (Class II).	Less than Significant with Mitigation	MM BIO-3.1: Wetland Mitigation Plan
Impact BIO-4: Have a substantial adverse effect on wildlife movement. (Class III).	Less than Significant	None required
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances (Class III).	Less than Significant	None required
Impact BIO-6: Contribute to cumulatively considerable impacts on biological resources (Class II).	Less than Significant with Mitigation	MM BIO-1.1: Special Status Plant Surveys MM BIO-1.2: Special-Status Plants Avoidance and Mitigation MM BIO-1.3: Burrowing Owl Avoidance and Exclusion Measures MM BIO-1.4: Nesting Bird Avoidance Measures MM BIO-3.1: Wetland Mitigation Plan

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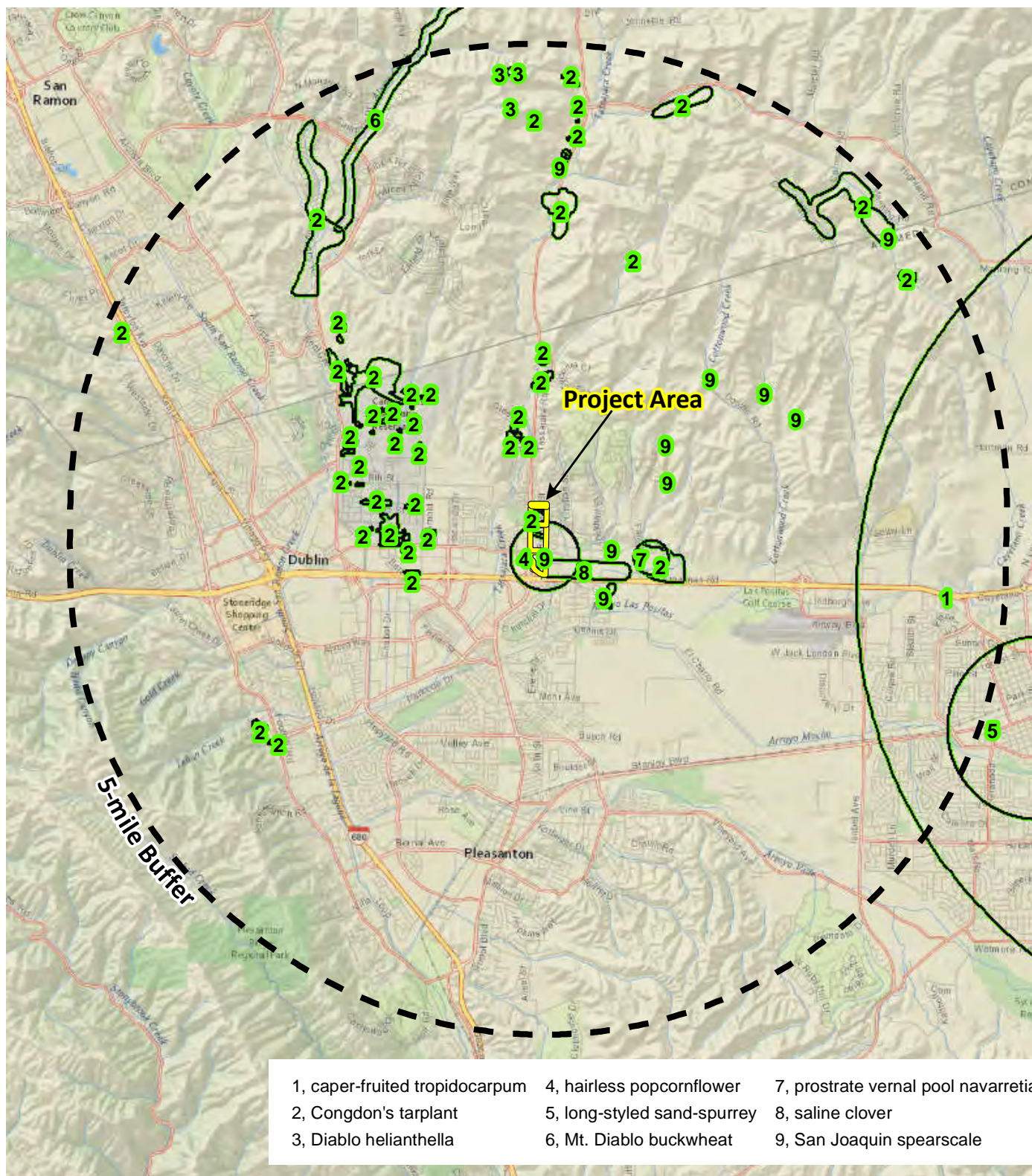
Source: WRA, 2022

Figure 7-1: Biological Communities on the Project Site
SCS Dublin Project
Environmental Impact Report



Not to scale

Kimley»Horn
Expect More. Experience Better.



Source: WRA, 2022

Figure 7-2: Special-Status Plant Species with Five Miles of the Project Site

SCS Dublin Project
Environmental Impact Report



Not to scale

Kimley»Horn
Expect More. Experience Better.



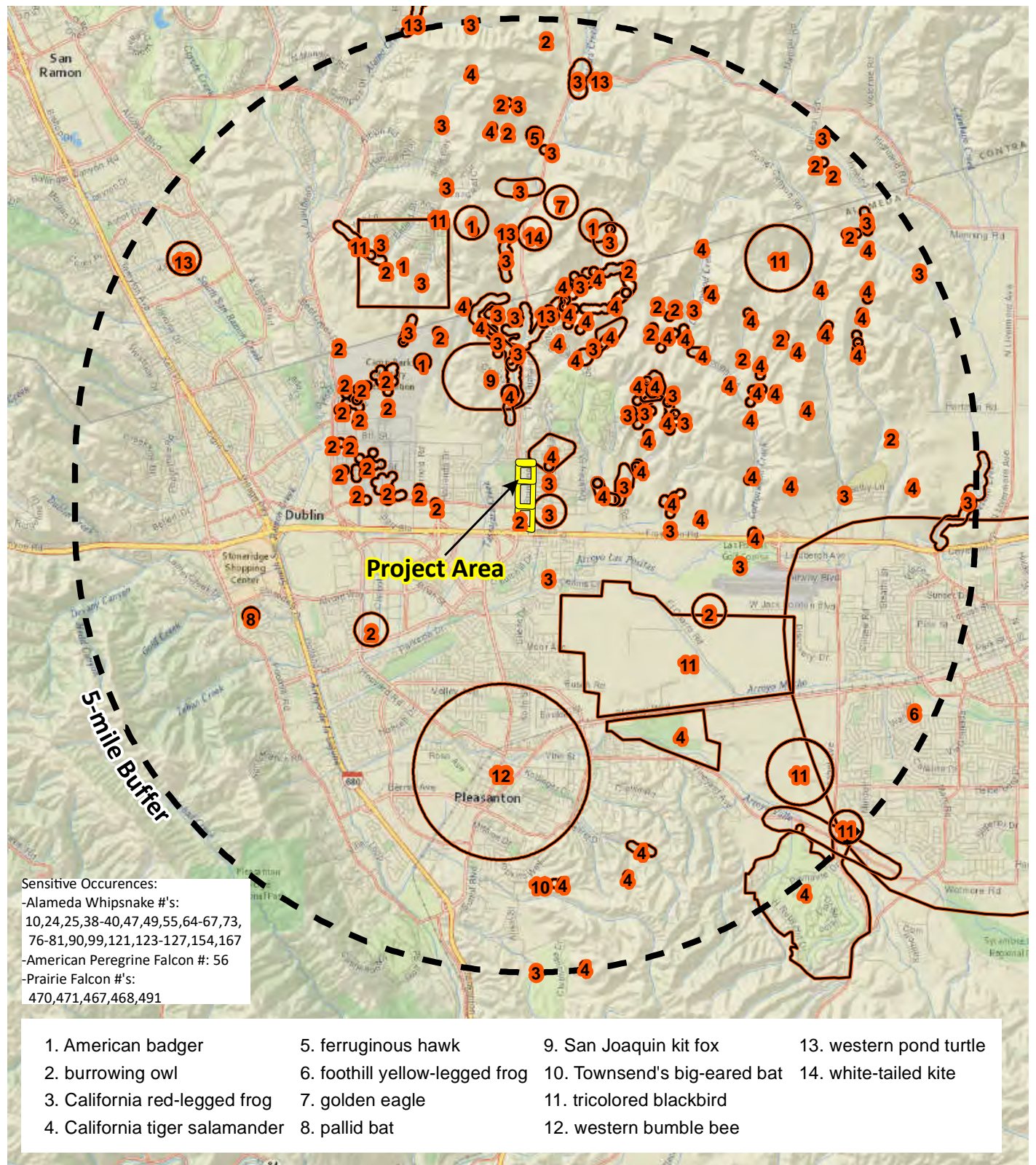
Source: WRA, 2022

Figure 7-3: Special Status Plant Species on the Project Site
SCS Dublin Project
Environmental Impact Report



Not to scale

Kimley»Horn
Expect More. Experience Better.



Source: WRA, 2022

Figure 7-4: Special-Status Wildlife Species within Five Miles of the Project Site

SCS Dublin Project
Environmental Impact Report



Not to scale

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8 Cultural & Tribal Cultural Resources

8.1 Introduction

This chapter describes effects on cultural and tribal cultural resources that could be caused by implementation of the project. The following discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project construction and operation. In addition, existing laws and regulations relevant to cultural and paleontological resources are described. In some cases, compliance with these existing laws and regulations would serve to reduce or avoid certain impacts that might otherwise occur with implementation of the project.

The term “cultural resources” encompasses historic, archaeological, and paleontological resources, and burial sites. It includes:

Historic Resources: Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State’s history.

Archaeological Resources: Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.

Paleontological Resources: Paleontology is the study of plant and animal fossils.

Burial Sites: Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

The term “tribal cultural resources” are either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1 of the Public Resources Code.
2. 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 Section 5024.1.

Information used to prepare this chapter came from the following resources:

- City of Dublin, *General Plan 1985*, as amended 2022
- City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022

- California Historic Resources Information System (CHRIS)

8.2 Scoping Issues Addressed

During the public comment scoping period for the project, the National American Heritage Commission provided general guidance on consultation with California Native American tribes and CEQA requirements.

8.3 Environmental Setting

This section presents information on cultural resources conditions in the greater project area, which includes the greater Tri-Valley area. The current condition and quality of cultural resources was used as the baseline against which to compare potential impacts of the project.

8.3.1 Prehistory

The Tri-Valley sub-region comprises of the cities of Dublin, San Ramon, Pleasanton, and Livermore, and portions of both Alameda County and Contra Costa County. Existing archaeological records are derived from excavations related to construction in areas south of I-580. These archaeological surveys make up the primary source of information on prehistoric life in the greater Livermore-Amador Valley area.

The first discoveries of buried archaeological sites were found in the Arroyo Mocho area south of I-580 on the banks of streams. Analysis of materials taken from these sites indicate that trading occurred with Native American peoples throughout central and northern California.

These prehistoric sites appear to have been abandoned during certain periods mainly due to regular flooding. To date, several village sites on the northern and southern borders of the arroyo's seasonal marsh, known in historic times as Willow Marsh, were found buried under varying amounts of silt material. The precise retreat of these inhabitants is unclear since similar sites on dry ground are rare for the Livermore and Amador valleys and have not been located in nearby foothills, nor on the project site.

As one possible explanation, there is evidence that the entire Livermore-Amador Valley area was abandoned for several hundred years and the inhabitants migrated south through Sunol and west to the San Francisco Bay. This group of people, presently named the "Meganos" people, have been traced from an early origin in the Sacramento Valley through the Concord drainage and to the San Francisco Bay margin.

By 500 or 600 A.D., the valley and the hills in the EDSP area were repopulated by the ancestors of the modern day Ohlones. Archaeological sites have been found in areas of higher ground near watercourses in Pleasanton and Livermore along the San Ramon drainage. However, none of these sites were located in the EDSP area.

Prehistoric Use of the Project Area

For the indigenous population, the EDSP area was likely used for seed gathering from grasses and acorn harvesting, as well as vegetation along the watercourses were denser flowing from the hills into Willow Marsh. Main habitation sites were situated along the marsh edges in the earliest period and then migrated to higher grounds south and west of the marsh approximately 1,500 years ago.

8.3.2 Historic Resources

Considerable alteration to the natural landscape occurred during the period of Anglo-American farming and ranching. All the drainages running through the EDSP area show signs of considerable siltation and erosion caused by cattle grazing and dry farming. Native grasses, mainly bunchgrass, have been replaced with European grasses. Large native trees have been removed or replaced with eucalyptus along drainages and at the locations of the ranches and homes found in the canyons. Oak, cottonwood, and willow trees can be found sporadically throughout the EDSP area.

8.3.3 Archaeological Resources

Six reports were found from previous archaeological surveys inside the EDSP area, concentrating on the Santa Rita Rehabilitation Center complex. The Santa Rita Rehabilitation Center is located approximately 0.56 mile west of the project.

8.3.4 Historic Sites

Although the California Archaeological Inventory located at Sonoma State University does not record any historic resources inside the EDSP area, numerous structures are listed in *The Thompson and West Historic Atlas of 1878*. The *1878 Historic Atlas* lists 16 structures within the EDSP area. Twelve of the historic sites identified to date in the EDSP are considered either in-use structures or farming complexes. Of these historic resources inventoried above, none are located within the project site.

8.4 Applicable Regulations, Plans, and Standards

8.4.1 Federal

National Register of Historic Places Eligibility

The National Historic Preservation Act of 1966 (as amended through 2000) authorizes the National Register of Historic Places (NRHP), a program for the preservation of historic properties ("cultural resources") throughout the Nation. The eligibility of a resource for NRHP listing is determined by evaluating the resource using criteria defined in 36 CFR 60.4 as follows:

- The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance

that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:

- That are associated with events that have made a significant contribution to the broad patterns of our history;
- That are associated with the lives of persons significant in our past;
- That embody the distinctive characteristics of a type, period, or method of construction;
- That represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or,
- That have yielded, or may be likely to yield, information important to prehistory or history.

Unless a site is of exceptional importance, it is not eligible for listing in the NRHP until 50 years after it was constructed.

All properties change over time. Therefore, it is not necessary for a property to retain all its historic physical features or characteristics to be eligible for listing on the NRHP. The property must, however, retain enough integrity to enable it to convey its historic identity; in other words, to be recognizable to a historical contemporary. The National Register recognizes seven aspects or qualities that, in various combinations, define integrity:

Location – the place where the historic property was constructed or the place where the historic event occurred.

Design – the combination of elements that create the form, plan, space, structure, and style of a property.

Setting – the physical environment of a historic property.

Materials – the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

Workmanship – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

Feeling – a property's expression of the aesthetic or historic sense of a particular period of time.

Association – the direct link between an important historic event or person and a historic property (National Park Service, 1990).

To retain historic integrity a property will always possess several, and usually most, of these aspects. To properly assess integrity, however, significance (why, where, and when a property is important) must first be fully established. Therefore, the issues of significance and integrity must always be considered together when evaluating a historic property.

Executive Order 11593 (May 13, 1971), 36 Code of Federal Regulations, Section 8921 as incorporated into Title 7, United States Code

Executive Order 11593, Protection of the Cultural Environment, orders the protection and enhancement of the cultural environment through providing leadership, establishing State offices of historic preservation, and developing criteria for assessing resource values.

American Indian Religious Freedom Act, Title 42, United States Code, Section 1996

The American Indian Religious Freedom Act protects Native American religious practices, ethnic heritage sites, and land uses.

Native American Graves Protection and Repatriation Act (NAGPRA) (1990), Title 25, United States Code

Native American Graves Protection and Repatriation Act (NAGPRA) defines “cultural items,” “sacred objects,” and “objects of cultural patrimony;” establishes an ownership hierarchy; provides for review; allows excavation of remains under certain conditions, but stipulates return of the remains according to ownership; sets penalties for violations; calls for inventories; and provides for return of specified cultural items.

8.4.2 State

CEQA, Archaeological Resources

CEQA and the CEQA Guidelines contain specific standards for determining the significance of impacts to archaeological sites (PRC §21083.2; 14 CCR §15064.5(c)). If the lead agency determines that the project may have a significant effect on unique archaeological resources, the EIR must address those archaeological resources (PRC §21083.2(a)). A “unique archaeological resource” is defined as an “archaeological artifact, object, or site” that, without merely adding to the current body of knowledge:

- Contains information needed to answer important scientific research questions and in which there is a demonstrable public interest;
- Has a special or particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person. (PRC §21083.2(g)).

Under CEQA, significant impacts on non-unique archaeological resources need not be addressed in an EIR. (PRC §21083.2(a), (h)).

The limitations in PRC §21083.2 relating to unique archaeological resources do not apply to archaeological sites that qualify as “historical resources.” (PRC §21083.2(l)). If a lead agency finds that an archaeological site is a historical resource, impact assessment is governed by PRC §21084.1, which provides standards for identification of historical resources (14 CCR §15064.5(c)(2). See §§13.58, 20.94-20.98). The CEQA Guidelines also provide that public agencies should seek to avoid effects that could damage a “historical resource of an archaeological nature” when it is feasible to do so (14 CCR §15126.4(b)(3)).

Native American Consultation

Assembly Bill (AB) 52 requires early notice of any project requiring an EIR, Mitigated Negative Declaration or Negative Declaration for any tribe that has submitted a written request. The City of Dublin received one formal request for tribal consultation pursuant to Public Resources Code Section 21080.3.1(b)(d) and (e). The City sent a letter to the tribe and no response for consultation was received.

Native American Historic Resource Protection Act; Archaeological, Paleontological, and Historical Sites; Native American Historical, Cultural, and Sacred Sites (Pub. Res. Code § 5097-5097.994)

Public Resources Code Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of Native American human remains on non-federal public lands. California Public Resources Code Section 5097.9 states that no public agency or private party on public property shall “interfere with the free expression or exercise of Native American Religion.” The Code further states that:

“No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine...except on a clear and convincing showing that the public interest and necessity so require.”

California Health and Safety Code

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner’s authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Public Resources Code Section 5097.5

California Public Resources Code Section 5097.5 prohibits excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.” Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

CEQA, Historic Resources

CEQA and the CEQA Guidelines contain specific standards for determining the significance of impacts on “historical resources” (PRC §21084.1, 14 CCR §15064.5). A resource listed in the California Register of Historical Resources, or determined by the State Historical Resources Commission to be eligible for listing in the Register, must be treated as an “historical resource” for purposes of CEQA. PRC §21084.1; 14 CCR §15064.5(a)(1). A resource designated as historically significant in a local register of historical resources, or identified as significant in an approved historical resources survey, is presumed to be significant. The presumption of significance may be overcome if the agency concludes, based on a preponderance of the evidence, that the site is not historically or culturally significant (PRC §21084.1; 14 CCR §15064.5(a)(2)).

A lead agency may also find that a site that does not meet any of these criteria should be treated as a historical resource under CEQA (PRC §21084.1; 14 CCR §15064.5(a)(4)). A lead agency may find that “any object, building, structure, site, area, place, record, or manuscript” is historically significant or significant in the “cultural annals of California” provided that its determination is “supported by substantial evidence in light of the whole record” (14 CCR §15064.5(a)(3)). The guidelines also note that a resource ordinarily should be considered historically significant if it meets the criteria for listing on the California Register of Historical Resources (14 CCR §15064.5(a)(3)).

California Register of Historical Resources

To be determined eligible for listing in the California Register of Historical Resources (CRHR), a property must be significant at the local, State, or national level under one or more of the following four criteria as defined in Public Resources Code 5024.1 and CEQA Guideline 15064.5(a).

- It is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States.
- It is associated with the lives of persons important to the nation or to California’s past.

- It 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.
- It has yielded, or may be likely to yield, information important to the prehistory or history of the state and the nation.

In addition to meeting one or more of the above criteria, a significant property must also retain integrity. Properties eligible for listing in the CRHR must retain enough of their historic character to convey the reason(s) for their significance. Integrity is judged in relation to location, design, setting, materials, workmanship, feeling, and association.

8.4.3 Local

City of Dublin General Plan

The City of Dublin's General Plan contains the following policy associated with cultural and tribal resources that are relevant to the project:

Guiding Policy 7.7.1.A.2: Follow State regulations as set forth in Public Resources Code Section 21083.2 regarding discovery of archaeological sites, and Historical Resources, as defined in Section 5020.1 of the Public Resources Code.

Eastern Dublin Specific Plan

The City of Dublin's Eastern Dublin Specific Plan contains the following policies and program associated with cultural and tribal resources that are relevant to the project:

Policy 6-24: The presence and significance of archaeological or historic resources will be determined, and necessary mitigation programs formulated, prior to development approvals for any of the sites identified in the cultural resource survey prepared for this plan.

Policy 6-25: The discovery of historic or prehistoric remains during grading and construction will result in the cessation of such activities until the significance and extent of those remains can be ascertained by a certified archaeologist.

Policy 6-26: All properties with historic resources which may be impacted by future development shall be subjected to in-depth archival research to determine the significance of the resource prior to any alteration.

Policy 6-27: Where the disruption of historic resources is unavoidable, encourage the adaptive re-use or restoration of historic structures (such as the old school house, several barns, and Victorian residences currently in the area) whenever feasible.

ACTION PROGRAM: Cultural Resources

Program 6P: The City of Dublin shall require the following actions as part of the application process for development within eastern Dublin:

- **Site Sensitivity:** Based on the first stage cultural resource survey of the area conducted as background for the Plan, the City will make a determination of whether the subject site has been identified as having prehistoric or historic resources potentially located on it.
- **Research:** For those sites with potential resources, a second level of detailed research and field reconnaissance will be required to determine the level of archaeological or historical significance. This research will be the responsibility of the development applicant, and be conducted by a qualified archaeologist. The research will be consistent with the guidelines for prehistoric and historic resources provided in the cultural resources survey prepared for eastern Dublin.
- **Mitigation:** For those sites that contain significant resources, a mitigation plan must be developed which is consistent with the policies in this Specific Plan and current CEQA guidelines concerning cultural resources.

City of Dublin Municipal Code

Section 8.48.020 Archaeology Regulations of the Dublin Municipal Code states that in the event that archaeological resources, prehistoric or historic artifacts are discovered during any construction or excavation, the following regulations shall apply:

A. **Cessation of construction activities.** Construction and/or excavation activities shall cease immediately and the Department of Community Development shall be notified.

B. **Procedure.** A qualified archaeologist shall be consulted to determine whether any such materials are significant prior to resuming ground breaking construction activities. Standardized procedures for evaluating accidental finds and discovery of human remains shall be followed as prescribed in Appendix K of the California Environmental Quality Act Guidelines.

8.5 Environmental Impacts and Mitigation Measures**8.5.1 Significance Criteria**

The following significance criteria for cultural and tribal resources were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address Lead Agency requirements and the full range of potential impacts related to this project.

Cultural Resources

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria.

- Cause a substantial adverse change in the significance of a historic resource (CEQA Guideline 15064.5).
- Cause a substantial adverse change in the significance of an archaeological resource (CEQA Guideline 15064.5).
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.
- Disturb any human remains, including those interred outside of formal cemeteries.

Tribal Cultural Resources

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:

- 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
- 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.

Significance Classifications

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

8.5.2 Impact Assessment Methodology

For cultural resources, this impact assessment is based on a comparison of known resource locations with the placement of ground disturbing project activities that have the potential to remove, relocate, damage, or destroy the physical evidence of past cultural activities. If such ground disturbance overlaps recorded site locations, then a direct impact may occur. Historical buildings and structures may be directly impacted if the nearby setting and context is modified substantially, even if the building or structure itself is not physically affected. Indirect impacts may occur if activities occur near, but not directly on, known cultural resources.

8.5.3 Summary of No and/or Beneficial Impacts

Known Historical or Archaeological Resources

None of the historic resources inventoried in the *1878 Historic Atlas* in the project area are located within the project site. In addition, no historic sites in the area were identified in the NRHP and CRHR databases. The project site also does not qualify as a unique archaeological resource. Additionally, no historic or archaeological resources were identified in the *Phase I Environmental Site Assessment* (ENGO, 2018). Therefore, the construction of the project would not impact any known historical resources or unique archaeological resources as defined by CEQA, and therefore there would be no impact.

Tribal Cultural Resources

The project site is not 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). The City sent a letter to one tribe AB52 and no response for consultation was received. In addition, the City requested a Sacred Land File search by the Native Heritage Commission and the result was negative. Therefore, the project site is not considered to be of cultural value to a California Native American tribe as the construction of the project would not impact any known tribal cultural resources as defined by CEQA, and there would be no impact.

8.5.4 Impacts of the Project

Impact CR-1: Cause a substantial adverse change to a previously unknown historic or archeological resource (Class II).

Of the historic resources inventoried in the *1878 Historic Atlas*, none of the historic sites are located within the project site. In addition, no historic sites were identified in the NRHP and CRHR databases. Nonetheless, there is always the possibility that previously unknown historic resources exist below the ground surface within the project site. This is a potentially significant impact.

Implementation of **MM CR-1.1: Historic or Archaeological Discovery During Construction** would reduce impacts to a level of less-than-significant level.

Mitigation for Impact CR-1

MM CR-1.1: Historic or Archaeological Discovery During Construction

If buried historic or archaeological resources are discovered during construction, operations shall stop within 50 feet of the find and a qualified archaeologist shall be consulted to evaluate the resource in accordance with CEQA Guidelines 15064.5(f), which requires the Lead Agency to make provisions for historical or unique archaeological resource accidentally discovered during construction.

The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the resource does not qualify as a significant resource, then no further protection or study is necessary. If the resource does qualify as a significant resource then the impacts shall be avoided by project activities. If the resource cannot be avoided, adverse impacts to the resource shall be addressed. The archaeologist shall make recommendations concerning appropriate mitigation measures that shall be implemented to protect the resources, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5(f) of the CEQA Guidelines. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.

Impact CR-2: Directly impact a paleontological resource or unique geologic feature (Class II).

The project site is not located in an area that is considered likely to have paleontological resources present. Fossils of plants, animals, or other organisms of paleontological significance have not been discovered at the project site, nor has the site been identified to be within an area where such discoveries are likely. The type of depositional environment at the project site typically does not present favorable conditions for the discovery of paleontological resources. Therefore, the project would not result in impacts to paleontological resources or unique geologic features. However, if significant paleontological resources are discovered, implementation of **MM CR-2.1: Paleontological Resource Monitoring** would reduce impacts to a less-than-significant level (Class II).

Mitigation for Impact CR-2

MM CR-2.1 Paleontological Resource Monitoring

In the event a fossil(s) is discovered during construction for the project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards.

The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the paleontological resources are found to be significant, they shall be avoided by project construction activities and recovered by a qualified paleontologist. Upon completion of the recovery, a paleontological assessment shall

be conducted by a qualified paleontologist to determine if further monitoring for paleontological resources is required. The assessment shall include (1) the results of any geotechnical investigation prepared for the project area, (2) specific details of the construction plans for the project area, (3) background research, and (4) limited subsurface investigation within the project area.

If a high potential to encounter paleontological resources is confirmed, a monitoring plan of further project subsurface construction shall be prepared in conjunction with this assessment. After project subsurface construction has ended, a report documenting monitoring, methods, findings, and further recommendations regarding paleontological resources shall be prepared and submitted to the Director of Community Development.

Impact CR-3: Inadvertently disturb human remains (Class III).

As described in the City of Dublin Specific Plan and Phase I Environmental Site Assessment (ENGEO, 2018), the project site does not contain any known recorded formal burial sites. Therefore, no known human remains are located on the project site. Pursuant to Section 7050.5 of the Health and Safety Code, if human remains are discovered, there shall be no further excavation or disturbance of the discovery site or any nearby area reasonably suspected to overlie adjacent human remains until the project applicant has complied with the provisions of State CEQA Guidelines Section 15064.5(e). These provisions require that the County Coroner be notified immediately.

If the remains are found to be Native American, the County Coroner is required to notify the Native American Heritage Commission within 24 hours. The most likely descendant of the deceased Native American is notified by the Commission and given the chance to make recommendations for the remains. If the Commission is unable to identify the most likely descendent, or if no recommendations are made within 24 hours, remains may be reinterred with appropriate dignity elsewhere on the property in a location not subject to further subsurface disturbance. If recommendations are made and not accepted, the Native American Heritage Commission will mediate the problem. CEQA Guidelines 15064.5(d) provides additional guidelines subsequent to the discovery of Native American human remains.

With implementation of existing regulations, the impact would be less than significant (Class III) and no mitigation is required.

8.5.5 Cumulative Impact Analysis

The geographic extent of cumulative impacts to cultural resources is dependent on the resource under discussion. For example, a cumulative impact to a historic architectural district would extend across the district, while the cumulative impact to individual archaeological or paleontological resources may accumulate across the City of Dublin, depending on the nature of the resources.

Impact CR-4: Contribute to cumulatively considerable impacts on cultural resources (Class II).

The project, in combination with past, present, and reasonably foreseeable future projects, could result in significant impacts to paleontological, archeological, or historic cultural resources as a result of inadvertent discovery and accidental destruction during construction. However, MM CR-1.1: Historic or Archeological Discovery During Construction and MM CR-2.1: Paleontological Resource Monitoring would apply to the project, ensuring that its contribution to cumulative impacts would not be considerable.

As stated above, project-level impacts to human remains would be less than significant with compliance with the provisions of State CEQA Guidelines Section 15064.5(e) should human remains be discovered on-site. Standard regulatory requirements and procedures are required of other present and reasonably foreseeable future projects, and cumulative impacts would be less than significant.

8.5.6 Level of Significance after Mitigation

Table 8-1: Summary of Impacts and Mitigation Measures – Cultural Resources summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to cultural resources.

Table 8-1: Summary of Impacts and Mitigation Measures – Cultural Resources

Impact	Impact Significance	Mitigation
Impact CR-1: Cause a substantial adverse change to a known historic, tribal cultural, or archeological resource (Class II).	Less than significant with mitigation	MM CR-1.1: Historic or Archeological Discovery During Construction
Impact CR-2: Directly impact a paleontological resource or unique geologic feature (Class II).	Less than significant with mitigation	MM CR-2.1: Paleontological Resource Monitoring
Impact CR-3: Inadvertently disturb human remains (Class III).	Less than significant	None required
Impact CR-4: Contribute to cumulatively considerable effects on cultural resources (Class II).	Less than significant with mitigation	MM CR-1.1: Historic or Archeological Discovery During Construction MM CR-2.1: Paleontological Resource Monitoring

8.6 References

City of Dublin, *General Plan*, 1985, amended 2022.

ENGEO, *Phase I Environmental Site Assessment*, 2018

Native American Heritage Commission, Sacred Lands File response letter, April 19, 2022

9 Geology & Soils

9.1 Introduction

This chapter describes effects on geology and soils that would be caused by implementation of the project. Information used to prepare this chapter came from the following resources:

- ENGEO, *At Dublin Preliminary Geotechnical Exploration*, 2018 (see [Appendix D](#))⁸
- City of Dublin, *General Plan 1985*, as amended 2022
- Online reference materials

9.2 Scoping Issues Addressed

During the public comment scoping period for the project, one comment that analysis of geology and soils could be scoped out of the EIR assuming compliance with the California Building Code was received.

9.3 Environmental Setting

This section presents information on geology and soils conditions in the project area. The current soils condition was used as the baseline against which to compare potential impacts of the project.

9.3.1 Subsurface Conditions

Dublin is located in the Coast Ranges geomorphic province, which is characterized as near parallel, northwest trending mountain ranges and valleys. As shown in [Figure 9-1: Soils on the Project Site](#), the online soil survey of the project site from the California Soil Resources Lab (CSRL, 2018) indicates that the project site contains four native soil mapping units: Clear Lake, Sycamore, Linne and Sunnyvale.

Clear Lake Series. The Clear Lake series consists of very deep, poorly drained soils located on plains and flat basins, which formed in alluvium derived from sandstone and shale. A representative profile for the series consists of a very dark gray (N 3/0) clay layer, 39 inches thick, with few faint redoximorphic concentrations in the upper 13 inches. A light olive brown (2.5Y 5/4) clay layer with light yellowish brown (10YR 6/4) masses of iron accumulations occurs below this layer to a depth of approximately 60 inches. This soil is a very hard, firm, and very sticky clay. This soil type is listed as hydric (USDA 2018b), but the two soil mapping units in this series that are present within the project area are drained (Clear Lake clay, drained, 3 to 7

⁸ This report was prepared on behalf of the project applicant for the At Dublin Development Project and peer reviewed by Kimley-Horn & Associates.

percent slopes, and Clear Lake clay, drained, 0 to 2 percent slopes, MLRA 14), and any hydric soil indicators observed within these mapping units may be relict.

Sycamore Series. The Sycamore series consists of poorly drained soils that formed in alluvium from sedimentary rock on floodplains. Typically, Sycamore soils contain grayish-brown (2.5Y 5/2), slightly acidic, slightly clay loam A horizons that are approximately 15 inches thick; grayish brown and light brownish-gray (2.5Y 4/4), distinctly mottled, mildly to moderately alkaline, silt loam B horizons that extend to a depth of 27 inches; and stratified light brownish-gray and pale brown (10YR 6/3) mottled loam, fine sandy loam and loamy fine sand calcareous C horizons. This soil type is listed as hydric (USDA, 2018b).

Linne Series. The Linne series consists of moderately deep, well drained soils on hills with slopes of 5 to 75 percent. They formed in material weathered from fairly soft shale and sandstone and have medium to very rapid runoff and moderately slow permeability. In a typical profile, the surface layer is composed of black (10YR 2/1), moderately alkaline clay loam that extends nine inches in depth. This soil is underlain by black to very dark gray (10YR 3/1), moderately alkaline clay loam that extends up to 29 inches in depth. From 29 to 32 inches, the soil is composed of gray and light brownish gray (10YR 5/1 and 6/2), moderately alkaline sandy clay loam. From 32 to 36 inches, the soil is composed of very pale brown and white (10YR 7/2 and 8/2) moderately alkaline fine sandy loam. Lastly, from 36 to 51 inches, the soil is comprised of light gray and pale yellow (2.5Y 7/2 and 8/4) moderately alkaline mudstone. This soil type is listed as hydric.

Sunnyvale Series. The Sunnyvale series consists of poorly drained, calcareous soils on nearly level valley floors north of Pleasanton. The surface soil is gray, granular, slightly calcareous, heavy clay loam. Sunnyvale soils are often used for irrigated row crops, for pasture, and for dry-farmed grain. A representative profile for the Sunnyvale series consists of an Ap horizon from 0 to 6 inches with dark gray to very dark grey (N4/ - N3/) silty clay. Similar colors are seen in an Alc2 horizon of silty clay from 6 to 14 inches in depth. A Clca horizon extends from 14 to 34 inches in depth, with light grey to dark grey (N7/ - N3/) silty clay. This soil type is listed as hydric.

9.3.2 Seismicity

The San Francisco Bay Area contains numerous active earthquake faults. The active faults mapped within 20 miles of the site are listed in [Table 9-1: Regional Faults and Seismicity](#). An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (about the last 11,000 years) (Bryant and Hart, 2007).

[Figure 9-2: Regional Fault Zones](#) shows the approximate locations of these faults and significant historic earthquakes recorded within the San Francisco Bay Region.

Table 9-1: Regional Faults and Seismicity

Fault Segment	Distance from Project Site (miles)	Direction from Project Site (miles)	Maximum Characteristic Magnitude
Mount Diablo Thrust	2.8	North	6.7
Calaveras	3.6	West	7.0
Greenville	8.2	Northeast	7.0
Hayward-Rodgers	10.4	West	7.3
Green Valley	14.8	Northwest	6.8
Great Valley	19.0	East	6.9

Source: ENGEO, 2018

The bedrock formations in the area south of Mount Diablo and north of the Livermore Valley have been folded and cut by thrust faults that typically dip toward the north, according to geologic mapping by Crane (1995) and Graymer, et al. (1996). Geologic studies by Unruh and Sawyer (1997) suggest that the core of Mount Diablo may be underlain at depth (several thousand feet) by an active “blind” thrust fault system (a “blind” thrust fault does not extend to the surface).

According to Unruh and Sawyer (1997), movement on the blind thrust fault system is responsible for the uplift of Mount Diablo and the folding of the rocks in the site vicinity. Unruh and Sawyer believe that surface effects of the deeply buried blind thrust fault system are typically relatively slow, diffuse, and distributed vertical movements associated with the growth of folds. According to their cross sections, the leading edge of the buried Mount Diablo thrust fault may exist at depths of three to five miles somewhere near the Tassajara Anticline, located approximately four miles to the north of the site.

Seismic Hazards

Fault Rupture

Fault rupture is a seismic hazard that affects structures sited above an active fault. The hazard from fault rupture is the movement of the ground surface along a fault during an earthquake. Typically, this movement takes place during the short time of an earthquake, but it also can occur slowly over many years in a process known as creep. Most structures and underground utilities cannot accommodate the surface displacements of several inches to several feet commonly associated with fault rupture or creep.

Ground Shaking

The severity of ground shaking depends on several variables such as earthquake magnitude, epicenter distance, local geology, thickness, seismic wave-propagation properties of

unconsolidated materials, groundwater conditions, and topographic setting. Ground shaking hazards are most pronounced in areas near faults or with unconsolidated alluvium.

Based on observations of damage from recent earthquakes in California (e.g., San Fernando 1971, Whittier-Narrows 1987, Landers 1992, Northridge 1994), ground shaking is responsible for 70 to 100 percent of all earthquake damage. The most common type of damage from ground shaking is structural damage to buildings, which can range from cosmetic stucco cracks to total collapse. The overall level of structural damage from a nearby large earthquake would likely be moderate to heavy, depending on the characteristics of the earthquake, the type of ground, and the condition of the building. Besides damage to buildings, strong ground shaking can cause severe damage from falling objects or broken utility lines. Fire and explosions are also hazards associated with strong ground shaking.

Liquefaction

Liquefaction tends to occur in loose, saturated fine-grained sands, coarse silts, or clays with low plasticity. The liquefaction process typically occurs at depths less than 50 feet below the ground surface, although liquefaction can occur at deeper intervals, given the right conditions. The most susceptible zone occurs at depths shallower than 30 feet below the ground surface.

Liquefaction can lead to several types of ground failure, depending on slope conditions and the geological and hydrological settings, of which the four most common types of ground failure are: 1) lateral spreads, 2) flow failures, 3) ground oscillation, and 4) loss of bearing strength.

A liquefaction potential analysis was conducted by ENGEO for the project site indicating that the interbedded layers of clay sand and sandy clay will settle approximately three inches due to cyclic softening and liquefaction.

Lateral Spreading

Lateral spreading is a failure within a nearly horizontal soil zone that causes the overlying soil mass to move toward a free face or down a gentle slope. Generally, the effects of lateral spreading are most significant at a free face or the crest of a slope and diminish with distance from the slope. Based on the lack of a laterally continuous layer of potentially liquefiable soil at the site and general flatness of the project site, the risk of lateral spreading is low.

Ground Lurching

Ground lurching is a result of the rolling motion imparted to the ground surface during energy released by an earthquake. Such rolling motion can cause ground cracks to form in weaker soils. The potential for the formation of these cracks is considered greater at contacts between deep alluvium and bedrock. Such an occurrence is possible at the project site as in other locations in the Bay Area region, but based on the site location, the offset is expected to be minor.

Flooding

Portions of the parcel to the south of Dublin Boulevard are in a Special Flood Hazard Area with a designation Zone AH.

Expansive Soils

Samples of existing near-surface soil were tested for plasticity index (PI) to estimate expansive potential. The existing near-surface soil samples tested yielded PIs ranging from 11 to 55, which indicate moderately high expansion potential.

Expansive soil can change in volume with changes in moisture. They can shrink or swell and cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Building damage due to volume changes associated with expansive soil can be reduced by: (1) using a rigid mat foundation that is designed to resist the settlement and heave of expansive soil, (2) deepening the foundations to below the zone of moisture fluctuation, i.e. by using deep footings or drilled piers, and/or (3) using footings at normal shallow depths, but bottomed on a layer of select fill having a low expansion potential.

9.4 Applicable Regulations, Plans, and Standards

9.4.1 Federal

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95–124. In establishing the National Earthquake Hazards Reduction Program, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic goals remain unchanged:

1. Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
2. Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
3. Improve earthquake hazards identification and risk assessment methods, and their use.
4. Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary National Earthquake Hazards Reduction Program agencies:

1. National Institute of Standards and Technology of the Department of Commerce
2. National Science Foundation
3. United States Geological Survey (USGS) of the Department of the Interior

4. Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of National Earthquake Hazards Reduction Program priorities is accomplished primarily through original research, publications, and recommendations to assist and guide state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

International Building Code

Published by the International Code Council, the scope of this code covers major aspects of construction and design of structures and buildings, except for 3-story one- and two-family dwellings and town homes. The 2012 International Building Code replaced the 1997 Uniform Building Code and contains provisions for structural engineering design. Published by the International Conference of Building Officials, the 2012 International Building Code (IBC) addresses the design and installation of structures and building systems through requirements that emphasize performance. The IBC includes codes governing structural as well as fire- and life-safety provisions covering seismic, wind, accessibility, egress, occupancy, and roofs.

9.4.2 State

California Building Code

The California Building Code (CBC) provides building codes and standards for design and construction of structures in California.

Chapter 16 of the CBC contains definitions of seismic sources and the procedure used to calculate seismic forces on structures. Chapter 33 of the CBC contains requirements relevant to the construction of underground transmission lines. Building permits for all projects are reviewed to ensure compliance with the CBC.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act, Public Resources Code (PRC), Section 2621-2630 (formerly the Special Studies Zoning Act), regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. This Act categorizes faults as active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be “sufficiently active” and “well defined” by detailed site-specific geologic explorations to determine whether building setbacks should be established.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, PRC, Sections 2690–2699, of 1990 directs the California Department of Conservation, Division of Mines and Geology [now called California Geological

Survey (CGS)] to delineate Seismic Hazard Zones. The purpose of the act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards.

Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones.

9.4.3 Local

City of Dublin General Plan

The City of Dublin's General Plan contains the following policies associated with geology and soils that are relevant to the project:

Guiding Policy 7.3.1.A.1: Maintain natural hydrologic systems.

Implementing Policy 7.3.1.B.1: Enforce the requirements of the Municipal Regional Permit for stormwater issued by the San Francisco Bay Regional Water Quality Control Board or any subsequent permit as well as Chapter 7 (Public Works) and Chapter 9 (Subdivisions) of the Dublin Municipal Code for maintenance of water quality and protection of stream courses.

Implementing Policy 7.3.1.B.2: Review development proposals to insure site design that minimizes soil erosion and volume and velocity of surface runoff.

Guiding Policy 8.2.1.A.1: Geologic hazards shall be mitigated or development shall be located away from geologic hazards to preserve life, protect property, and reasonably limit the financial risks to the City of Dublin and other public agencies that would result from damage to poorly located public facilities.

Implementing Policy 8.2.1.B.1: Structural and Grading Requirements

- All structures shall be designed to the standards delineated in the Dublin Building Code and Dublin's Grading Ordinance. A "design earthquake" shall be established by an engineering geologist for each structure for which ground shaking is a significant design factor.
- Structures intended for human occupancy shall be at least 50 feet from any active fault trace; freestanding garages and storage structures may be as close as 25 feet. These distances may be reduced based on adequate exploration to accurately locate the fault trace.
- Generally, facilities should not be built astride potential rupture zones, although certain low-risk facilities may be considered. Critical facilities that must cross a fault, such as oil, gas, and water lines, shall be designed to accommodate the maximum expected offset

from fault rupture. Site specific evaluations shall determine the maximum credible offset.

- A preliminary geologic hazards report must be prepared for all subdivisions. Any other facility that could create a geologic hazard, such as a road or a building on hillside terrain, must also have such a study. Each of the hazards described in the Seismic Safety and Safety Element must be evaluated. This hazard analysis shall be prepared by a registered engineering geologist.
- Detailed geologic studies will be required at the tentative subdivision map stage for all projects within the Landslide Hazard Area Boundary on the Geologic Hazards and Constraints map, and for other projects if the preliminary investigation indicates a potential geologic hazard. Proposals for mitigation should be included at this stage. The detailed analysis for projects in the Landslide Hazard Area Boundary must consider:
 - Cumulative effect of new development on a partially developed slide;
 - Effects of septic leach systems, garden watering, and altered drainage patterns;
 - Impact of a maximum credible earthquake;
 - Where applicable, passage of the Calaveras Fault through or under landslide deposits;
 - Debris flow and other downslope hazards (especially common east of Dublin). Care must be taken not to locate structures in the path of potential debris flows.
 - Where published maps identify or show “ancient” or Quaternary slides on sites of proposed development, their stability must be analyzed, and effects of the proposed development on the area's stability must be evaluated by a soils engineer.
 - If the preliminary report indicates liquefaction potential, an engineering analysis and design, if necessary, to mitigate liquefaction hazards, shall be required for all structures planned for human occupancy.
 - Evaluation for shrink-swell potential shall be included with all soils reports and design recommendations formulated where the potential is present. These analyses and recommendations shall include public streets and utilities, to reduce future public repair costs.
 - A surface fault rupture evaluation, as outlined by the State of California for Special Studies Zones (Alquist-Priolo Act), shall be required for all development within the Revised Special Studies Zones as shown on the Geologic Hazards and Constraints map.
 - The fault rupture evaluation should be conducted after building sites are specifically defined. Sites situated outside of this zone but within the Preliminary Zones (Slossen, 1973) shall be evaluated if proposed for multifamily dwellings or for public or recreational facilities.

- Any changes in grading or building design that would be significantly affected by geologic hazards or soils conditions, or in turn would significantly alter geologic or soils conditions, shall be accompanied by a re-analysis of those conditions. In addition, any conditions discovered during excavation or grading that significantly depart from the previously described geologic and soils setting shall be evaluated.

Implementing Policy 8.2.1.B.3J: Post-earthquake or damage reconstruction of existing structures shall be permitted only if mitigating factors are incorporated.

Implementing Policy 8.2.1.B.4: Data Review and Collection

- All required reports and data shall be reviewed by the Alameda County Geologist or a consulting engineering geologist. This individual shall participate in the review process from the earliest proposal stage to completion of the project.
- A file of all geologic and soils reports and grading plans shall be maintained as reference material for future planning and design on each site as well as on adjacent sites.
- City and developer shall endeavor to fully disclose hazards to present and future occupants and property owners.

Eastern Dublin Specific Plan

The City of Dublin's Eastern Dublin Specific Plan contains the following policy and program associated with geology and soils that are relevant to the project:

Policy 6-43: New development shall be designed to provide effective control of soil erosion as a result of construction activities and the alteration of site drainage characteristics.

Program 6H: The City should enact and enforce an erosion and sedimentation control ordinance establishing performance standards to ensure maintenance of water quality and protection of stream channels. The ordinance should regulate grading and development activities adjacent to streams and wetland areas and require revegetation of all ground disturbances immediately after construction to reduce erosion potential. Until such an ordinance is in place, the City shall require project applicants to provide a detailed erosion and sedimentation control plan as part of the project submittal.

Dublin Municipal Code

Dublin Municipal Code, Chapter 7.32 adopts the 2019 CBC; as such, all new construction within the city limits is required to adhere to its seismic safety standards. The City of Dublin Community Development Department, Building and Safety Division, is responsible for the administration and enforcement of the Building Code.

9.5 Environmental Impacts and Mitigation Measures

9.5.1 Significance Criteria

The following significance criteria for geology & soils were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address Lead Agency requirements and the full range of impacts related to the project.

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria:

- Result in triggering or acceleration of geologic processes, such as landslides, substantial soil erosion, or loss of topsoil during construction.
- Expose people or structures to potential risk of loss or injury where there is high potential for seismically induced ground shaking, landslides, liquefaction, settlement, lateral spreading, and/or surface cracking.
- Expose people or structures to potential risk of loss or injury where there is high potential for earthquake-related ground rupture near major fault crossings.
- Expose people or structures to potential risk of loss or injury where corrosive, expansive or other unsuitable soils are present.
- Result in soils that are unable to support an on-site wastewater disposal system (septic).

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

9.5.2 Summary of No and/or Beneficial Impacts

Exposure to Earthquake-Related Ground Rupture

The project site is not located within an Alquist-Priolo Earthquake Fault Zoning Map as mapped by the State Geologist. The closest known fault to the project site is the Mount Diablo Thrust fault, located approximately 2.8 miles north of the project site. There are no known or potentially active faults located within or adjacent to the project site. Based on the distance of

the project site from the Mount Diablo Thrust fault, the project would not expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving fault rupture, and therefore there would be no impact.

Landslide Susceptibility

The project site is relatively flat and is not located in an area that would be affected by a landslide. Therefore, there would be no impact.

On-site Wastewater Disposal System

The project would involve disposal of wastewater via a sanitary sewer, and there would be no septic systems under the project. Therefore, there would be no impact.

Extraction of Mineral Resources

There are no mines or quarries within 1,000 feet of the project site; nor is the project site within a known mapped oil or gas field, and therefore there would be no impact.

9.5.3 Impacts of the Proposed Project

Impact GEO-1: Expose people or structures to potential risk of loss or injury associated with seismic hazards (Class II).

Ground Shaking

An earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the site, similar to that which has occurred in the past. To mitigate the shaking effects, all structures will be required to be designed using sound engineering judgment and the current California Building Code (CBC) requirements, as a minimum.

As part of the project applicant's building permit application, they would be required to submit a design-level geotechnical report specific to the project. This report would provide recommendations on the appropriate level of soil engineering and building design necessary to minimize ground-shaking hazards. Accordingly, **MM GEO-1.1: Implement Preliminary Geotechnical Report Recommendations** is proposed, requiring the applicant to submit a design-level geotechnical report to the City of Dublin for review and approval. The implementation of this mitigation measure would ensure that the project is not exposed to strong ground shaking hazards and impacts would be less than significant.

Ground Failure, Including Liquefaction, Lateral Spreading, and Ground Lurching

The Preliminary Geotechnical Report prepared for the At Dublin project indicated that based on the lack of a laterally continuous layer of potentially liquefiable soil and the general flatness of the project site, the risk of lateral spreading is low. In addition, based on the site location, the occurrence of ground lurching is expected to be minor.

Liquefaction tends to occur in loose, saturated fine-grained sands, coarse silts, or clays with low plasticity. The liquefaction potential analysis indicated that interbedded layers of clay sand and sandy clay will settle approximately three inches due to cyclic softening and liquefaction. Based on the high end of the calculated total liquefaction settlements, site improvements on the project site should be designed to withstand a differential settlement of 1½ inches over a 30-foot distance and perform as intended. To mitigate the differential settlement for structures, the Preliminary Geotechnical Report recommends post-tensioned mat foundations for the residential structures and commercial structures.

With incorporation of **MM GEO-1.1 Implement Preliminary Geotechnical Report Recommendations** to implement geotechnical report recommendations into the final project design and construction documents for the project, and compliance with the CBC and General Plan policies, impacts would be less than significant (Class II).

Mitigation for Impact GEO-1

MM GEO-1.1 Implement Preliminary Geotechnical Exploration Recommendations

The project applicant shall consult with a registered geotechnical engineer to prepare a design-level geotechnical investigation that incorporates the recommendations in the Preliminary Geotechnical Exploration. The design-level geotechnical report shall address, but not be limited to, site preparation and grading, building foundations, and CBC seismic design parameters. A design-level geotechnical report shall be prepared and submitted in conjunction with Building Permit application(s) and reviewed and approved by the City of Dublin. Recommendations from the design-level geotechnical report shall be incorporated into the final project design and construction documents for each phase of the project.

Impact GEO-2: Trigger or accelerate substantial soil erosion or loss of topsoil (Class II).

The project would involve grading, building construction, and paving activities that could result in erosion and sedimentation. Based on site elevation and distance from water sources, flooding is not expected to occur at the project site.

The topsoil is expected to have a low to moderate permeability level for stormwater infiltration in grassy swales or permeable pavers, unless subdrains are installed. Thus, limited stormwater infiltration is assumed to occur on the project site. However, the Preliminary Geotechnical Exploration recommends a Civil Engineer review pertinent information relating to possible flood levels for the project site based on final pad elevations and provide appropriate design measures for development of the project, if recommended.

Projects involving construction on sites that are one acre or more are required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies how the discharger will protect water quality during construction activities. These measures include, but are not limited to: design and construction of cut and fill slopes in a manner that will minimize erosion, protection of exposed slope areas, control of surface water flows over exposed soils, use of

wetting or sealing agents or sedimentation ponds, limiting soil excavation in high winds, construction of beams and runoff diversion ditches, and use of sediment traps, such as hay bales. (Also see [Chapter 12: Hydrology & Water Quality](#).)

Because the near-surface soil is moderately to highly expansive, the Preliminary Geotechnical Exploration recommends restricting the amount of surface water infiltration near structures, pavements, flatwork, and slabs-on-grade. This may be accomplished by:

- Selecting landscaping that requires little or no watering, especially within three feet of structures, slabs-on-grade, or pavements.
- Using low precipitation sprinkler heads.
- Regulating the amount of water distributed to lawn or planter areas by installing timers on the sprinkler system.
- Providing surface grades to drain rainfall or landscape watering to appropriate collection systems and away from structures, slabs-on-grade, or pavements.
- Preventing water from draining toward or ponding near building foundations, slabs-on-grade, or pavements.
- Avoiding open planting areas within three feet of the building perimeter.

With incorporation of [MM GEO-1.1: Implement Preliminary Geotechnical Report Recommendations](#) to implement the Preliminary Geotechnical Exploration recommendations into the final project design and construction documents for the project, and compliance with the CBC and General Plan policies, impacts would be less than significant (Class II).

Impact GEO-3: Expose people or structures to substantial safety risks as a result of liquefaction or expansive soils (Class II).

Ground Failure Including Liquefaction

Laboratory samples of soils in the project area exhibit moderate to high shrink/swell potential with variations in moisture content. The Preliminary Geotechnical Exploration includes recommendations including the use of post-tensioned mat foundations, keeping exposed soils moist prior to placement of concrete for foundation construction, and recommendations for compaction of clay soil to reduce the swell potential of the clay.

With incorporation of [MM GEO-1.1: Implement Preliminary Geotechnical Report Recommendations](#) to implement these Preliminary Geotechnical Exploration recommendations into the final project design for the project, and compliance with General Plan policies, expansive soil conditions would be abated, and impacts would be less than significant (Class II).

9.5.4 Cumulative Impact Analysis

Because geologic impacts are site-specific and highly dependent upon the structural characteristics of individual projects, cumulative geologic hazards and soils impacts are generally confined to the project site and immediate vicinity.

Impact GEO-4: Contribute to cumulatively considerable effects on geology and soils (Class II).

Most geologic-related impacts from development are site-specific and, if properly designed, would not result in worsening of the environmental or public health and safety. Cumulative development would be subject to site-specific geologic and/or soils constraints; pursuant to the City of Dublin requirements, a registered geotechnical engineer would investigate site-specific conditions and minimize exposure to hazards or constraints with implementation of their recommendations.

Cumulative development would also involve the exposure of an increased number of people and/or structures to risk of earthquakes and their associated geologic hazards. New construction would be required to comply with the most current CA Building Code (CBC), which establishes building standards to minimize risk based on the geologic and seismic conditions of the region in which a project is located.

With administration of these requirements, the incorporation of **MM GEO-1.1: Implement Preliminary Geotechnical Report Recommendations** to implement Preliminary Geotechnical Exploration recommendations, and adherence to the CBC, cumulative geologic and soils impacts would be less than significant with mitigation.

9.5.5 Level of Significance after Mitigation

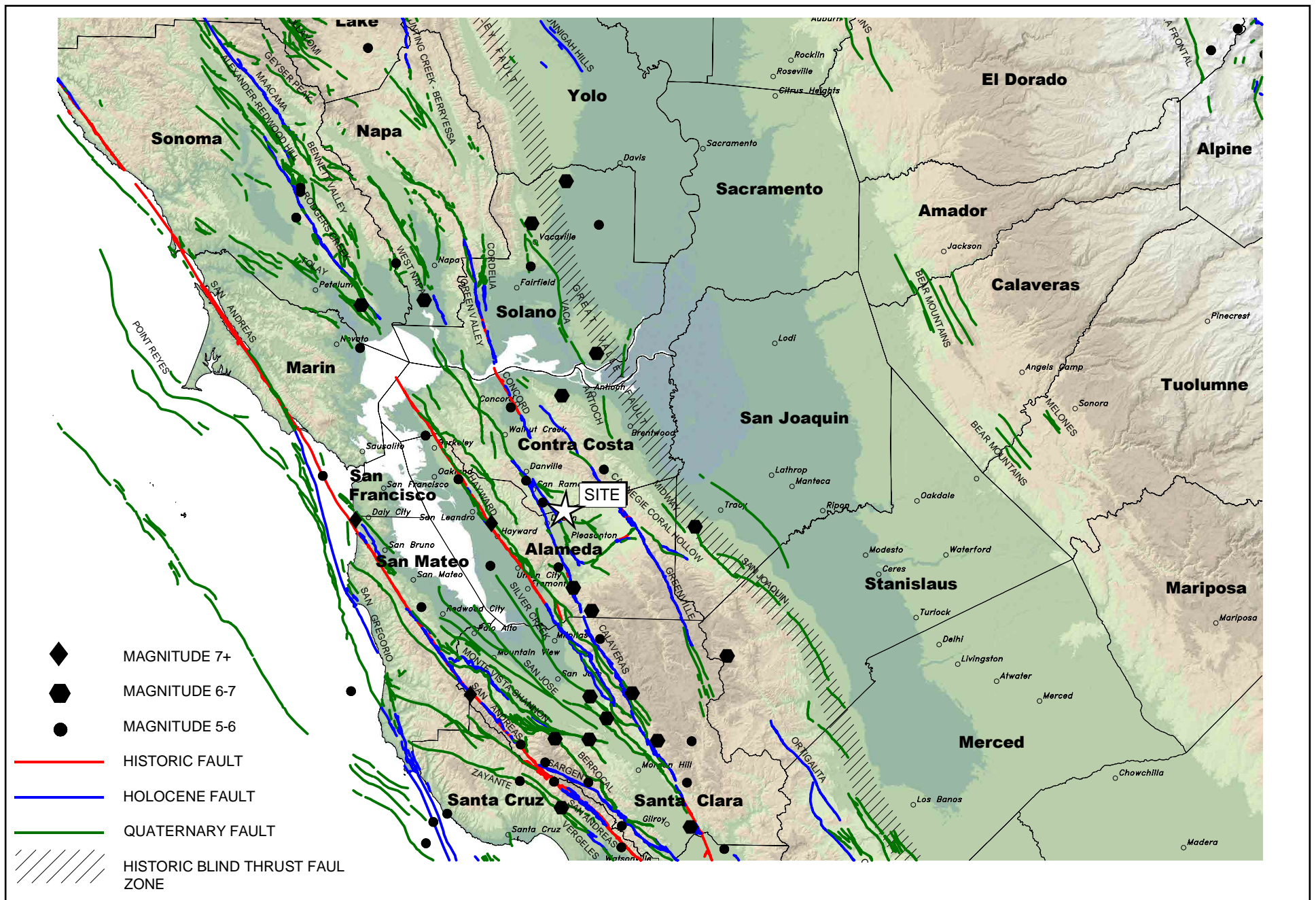
Table 9-2: Summary of Impacts and Mitigation Measures – Geology & Soils summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to geology & soils.

Table 9-2: Summary of Impacts and Mitigation Measures – Geology & Soils

Impact	Impact Significance	Mitigation
Impact GEO-1: Expose people or structures to potential risk of loss or injury associated with seismic hazards (Class II).	Less than Significant with Mitigation	MM GEO-1.1: Implement Preliminary Geotechnical Exploration Recommendations
Impact GEO-2: Trigger or accelerate substantial soil erosion or loss of topsoil (Class II).	Less than Significant with Mitigation	MM GEO-1.1: Implement Preliminary Geotechnical Exploration Recommendations
Impact GEO-3: Expose people or structures to substantial safety risks as a result of liquefaction (Class II).	Less than Significant with Mitigation	MM GEO-1.1: Implement Preliminary Geotechnical Exploration Recommendations
Impact GEO-4: Contribute to cumulatively considerable effects on geology and soils (Class II).	Less than Significant with Mitigation	MM GEO-1.1: Implement Preliminary Geotechnical Exploration Recommendations

9.6 References

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Source: ENGEO, 2022

Figure 9-2: Regional Fault Zone

SCS Dublin Project

Environmental Impact Report



Not to scale

Kimley»Horn

Expect More. Experience Better.

10 Greenhouse Gas Emissions

10.1 Introduction

This section describes effects on climate change and greenhouse gas emissions that would be caused by implementation of the project. Information used to prepare this section came from the following resources:

- Project application and related materials
- Air quality data provided by the California Air Resources Board (CARB)
- California Environmental Quality Act (CEQA) Air Quality Guidelines
- Bay Area Air Quality Management District (BAAQMD), *Clean Air Plan* 2017
- City of Dublin, *General Plan*, 1985 amended 2022
- City of Dublin, *Climate Action Plan 2030 And Beyond*, 2020

The study area for climate change and the analysis of greenhouse gas (GHG) emissions is broad because climate change is influenced by world-wide emissions and their global effects. However, the study area is also limited by the CEQA Guidelines [Section 15064(d)], which directs lead agencies to consider an “indirect physical change” only if that change is a reasonably foreseeable impact that may be caused by the project. This analysis limits discussion to those physical changes to the environment that are not speculative and are reasonably foreseeable.

10.2 Scoping Issues Addressed

During the public comment scoping period for the project, one comment was made that greenhouse gas emissions be analyzed, particularly in context to traffic.

10.3 Environmental Setting

10.3.1 Climate Change and Greenhouse Gases

Certain gases in the earth’s atmosphere classified as GHGs, play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space. A portion of the radiation is absorbed by the earth’s surface and a smaller portion of this radiation is reflected toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This

phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (Intergovernmental Panel on Climate Change, 2013). **Table 10-1: Description of Greenhouse Gases**, described the primary GHGs attributed to global climate change, including their physical properties.

GHGs are emitted by both natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to climate change. Climate change is by definition a cumulative impact because it occurs worldwide. Although emissions of one single project do not cause climate change, GHG emissions from multiple projects (past, present and future) throughout the world could result in a cumulative impact with respect to climate change.

Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆ (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO₂e), and is the amount of a GHG emitted

multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH₄ has a GWP of 28, meaning its global warming effect is 28 times greater than carbon dioxide on a molecule per molecule basis (United Nations Intergovernmental Panel on Climate Change [IPCC], 2014).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (CalEPA, 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Table 10-1: Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO ₂)	CO ₂ is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO ₂ is variable because it is readily exchanged in the atmosphere. CO ₂ is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N ₂ O)	N ₂ O is largely attributable to agricultural practices and soil management. Primary human-related sources of N ₂ O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N ₂ O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years. The Global Warming Potential of N ₂ O is 298.
Methane (CH ₄)	Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH ₄ include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH ₄ is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of Chlorofluorocarbons (CFCs) and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	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. Two main sources of PFCs are primary aluminum

Greenhouse Gas	Description
	production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF ₆)	SF ₆ is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. 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. The Global Warming Potential of SF ₆ is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen trifluoride	Nitrogen trifluoride (NF ₃) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, Overview of Greenhouse Gases, April 11, 2018 (<https://www.epa.gov/ghgemissions/overview-greenhouse-gases>); U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; IPCC *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, *Advancing the Science of Climate Change*, 2010; U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010;

10.3.2 Greenhouse Gas Emissions Inventory

Total U.S. GHG emissions were 5,981.4 million metric tons (MMT) CO₂e in 2020 (United States Environmental Protection Agency [U.S. EPA], March 2022). Total U.S. emissions have decreased by 7.3 percent from 1990 to 2020 and decreased by 21.4 percent below 2005 levels in 2020, after accounting for sequestration from the land sector (U.S. EPA, 2020). In 2020, fossil fuel combustion accounted for 92.1 percent of CO₂ emissions (U.S. EPA, April 2022). Important drivers influencing emissions levels include: (1) changes in demand for energy and (2) a general decline in the carbon intensity of fuels combusted for energy in recent years by non-transport sectors of the economy.

Based upon the California Air Resources Board (CARB) California Greenhouse Gas Emissions for 2000 to 2019 (CARB, July 2021), California produced 418.2 MMT CO₂e in 2019. The major source of GHGs in California is transportation, contributing 39.7 percent of the state's total GHG emissions. Industrial activity is the second largest source, contributing 21.1 percent of the state's GHG emissions (CARB, July 2021). California's relatively high emissions compared to other states are due in part to its large size and large population compared to other states.

The City of Dublin has roughly 60 percent of total CO₂e coming from transportation, 18 percent from commercial and industrial uses, roughly 18 percent from residential, and the remaining four percent from solid waste and water & wastewater (City of Dublin, 2020); refer to [Table 10-2: City of Dublin CAP Reduction Goal Analysis](#).

Table 10-2: Dublin Community-wide 2015 GHG Emissions and Adjusted Forecast by Sector (MTCO₂e)

Emissions Summary	2015	2020	2025	2030	2045
Residential Electricity	21,199	11,505	10,507	8,202	525
Commercial/Industrial Electricity	33,628	17,502	16,362	13,055	890
Residential Gas	35,997	40,162	41,178	42,194	43,210
Commercial/Industrial Gas	20,961	23,752	24,931	26,109	28,466
Waste	12,736	14,138	14,961	15,784	16,881
Water/Wastewater	2,258	1,218	1,148	923	62
Transportation	191,061	168,488	163,288	156,503	164,699
Total Emissions	317,840	276,765	272,374	262,770	254,733
Population	57,514	64,624	68,083	71,541	75,000
Emissions Per Capita	5.5	4.3	4.0	3.7	3.4

Source: City of Dublin Climate Action Plan, 2020. Table 4-2- Dublin Community-Wide 2015 Emissions and Adjusted Forecast by Sector (MT CO₂e).

10.4 Applicable Regulations, Plans, and Standards

10.4.1 Federal

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding. The U.S. EPA authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. U.S. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (carbon dioxide [CO₂], methane [CH₄], nitrous oxide [N₂O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF₆]) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and the U.S. EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, the George W. Bush Administration issued Executive Order 13432 in 2007 directing the U.S. EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, U.S. EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the U.S. EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the U.S. EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the U.S. EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the U.S. EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the U.S. EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

In 2018, the President and the U.S. EPA stated their intent to halt various federal regulatory activities to reduce GHG emission, including the phase two program. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. On September 27, 2019, the U.S. EPA and the NHTSA published the “Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program.” (84 Fed. Reg. 51,310 (Sept. 27, 2019).) The Part One Rule revokes California’s authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the U.S. EPA and NHTSA finalized rulemaking for SAFE Part Two sets CO₂ emissions standards and corporate average fuel economy (CAFE) standards for passenger vehicles and light duty trucks, covering model years 2021-2026. The current U.S. EPA administration has repealed SAFE Rule Part One, effective January 28, 2022, and is reconsidering Part Two.

10.4.2 State

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California’s contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects.

Assembly Bill 1493

Assembly Bill (AB) 1493 (2002), referred to as “Pavley,” requires CARB to develop and adopt regulations to achieve “the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.” On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016, and Pavley II, which is now referred to as “LEV (Low Emission Vehicle) III GHG” covers 2017 to 2025.

Under Pavley, fleet average emission standards were intended to reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules would be fully implemented, new automobiles would emit 34 percent less GHGs. Statewide CO₂e emissions would be reduced 3 percent by 2020 and 12 percent by 2025. The reduction would increase to 27 percent in 2035 and even further to 33 percent reduction in 2050 (CARB, 2013).

Assembly Bill 32 and Scoping Plan

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006." AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05) and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent by 2020.
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several Sustainable Communities Strategies have been adopted).
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).
- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation (CARB 2008).

After completing a comprehensive review and update process, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO₂e. CARB approved the Scoping Plan on

December 11, 2008. The Scoping Plan includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e. g Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted and implementation activities are ongoing.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2014 Scoping Plan update defined CARB's climate change priorities for the next 5 years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The 2014 update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB, 2014).

In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017 CARB adopted a second update to the Scoping Plan⁹. The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping Plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and support the Clean Power Plan and other Federal actions. These measures include increasing the Renewable Portfolio Standard to 50 percent by 2030 and extending the cap-and-trade program to 2030 and providing the revenue towards climate programs, disadvantage communities, and projects like the high-speed rail. The 2017 Scoping Plan also includes a 50 percent reduction in petroleum use in vehicles, increasing energy efficiency savings at existing buildings, carbon sequestration in the land base, and reducing methane, black carbon, and other short-live climate pollutants.

The AB 32 Scoping Plan also identifies a cap-and-trade program as one of the strategies California will employ to reduce GHG emissions. Under the cap-and-trade program, an overall limit on GHG emissions from capped sectors will be established and facilities subject to the cap will be able to trade permits (allowances) to emit GHGs. The program began on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions and extending until 2030.

Senate Bill 1368

Senate Bill (SB) 1368 (Emission Performance Standards) is the companion bill of AB 32, which directs the California Public Utilities Commission to adopt a performance standard for GHG

⁹ California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed May 9, 2022.

emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs. of CO₂ per megawatt-hour (MWh).

Senate Bill 375

SB 375, signed in September 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

Senate Bills 1078 and X1-2 and Executive Orders S-14-08 and S-21-09

These bills enact the renewable electricity standards for the State. SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, then-Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. The existing RPS requires retail sellers to supply 20 percent of their total electrical load from renewable energy sources by 2010. SB 350 (see below) extended this goal to 50 percent by 2050.

To meet this new goal, a substantial increase in the development of wind, solar, geothermal, and other "RPS eligible" energy projects will be needed. Executive Order S-14-08 seeks to accelerate such development by streamlining the siting, permitting, and procurement processes for renewable energy generation facilities. To this end, S-14-08 issues two directives: (1) the existing Renewable Energy Transmission Initiative will identify renewable energy zones that can be developed as such with little environmental impact and (2) the California Energy Commission (CEC) and the California Department of Fish & Wildlife (CDFW) will collaborate to expedite the review, permitting, and licensing process for proposed RPS-eligible renewable energy projects.

Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2, which codified the 33 percent by 2020 goal.

Senate Bill 350

The Clean Energy and Pollution Reduction Act of 2015 was signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator (ISO) to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

Assembly Bill 398

Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the State. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40 percent by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

Senate Bill 32

Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions to achieve 40 percent below 1990 levels by 2030.

Senate Bill 150

Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with State targets (i.e., 40 percent below their 1990 levels by 2030). SB 150 creates a process to include communities in discussions on how to monitor their regions' progress on meeting these goals. The bill also requires the CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

Senate Bill 100

Signed into Law in September 2018, SB 100 increased California's renewable electricity portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Executive Orders

California's Executive Branch has taken several actions to reduce GHGs through the use of executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was codified in AB 32. Because the 2050 target is only contained in an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07. Issued on January 18, 2007, Executive Order S 01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Executive Order S-13-08. Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08. Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020.

Executive Order S-21-09. Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to

update the Climate Change Scoping Plan to express the 2030 target in terms of MMCO₂e. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

Executive Order B-55-18. Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing GHG emissions. The executive order requires CARB to work with relevant state agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

California Regulations and Building Codes

Title 20- Appliance Efficiency Regulations. The California Energy Commission adopted Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) on October 11, 2006. The regulations were approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. While these regulations are now often viewed as "business-as-usual," they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

Title 24- California Building Code. The California Energy Resources Conservation and Development Commission adopted energy conservation standards for new residential and nonresidential buildings in June 1977 in response to a legislative mandate to reduce California's energy consumption. These standards were most recently revised in 2022 and take effect on January 1, 2023 (Title 24, Part 6, of the California Code of Regulations [CCR]). The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code was adopted as part of the California Building Standards Code (CALGreen) (Part 11, Title 24, CCR). The green building standards that became mandatory in the 2010 edition of the code established voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.

10.4.3 Regional & Local

Bay Area Air Quality Management District

The BAAQMD regulates air quality in the San Francisco Bay Area Air Basin and is responsible for attainment planning related to criteria air pollutants and for district rule development and enforcement. The district inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law. It also reviews air quality analyses prepared for CEQA assessments and has published the *CEQA Air Quality Guidelines* documents for use in evaluation of air quality (including GHG) impacts. In April 2022, the BAAQMD approved new CEQA thresholds for evaluating climate impacts from land use projects and plans.

East Bay Community Energy

East Bay Community Energy (EBCE) is a community choice aggregation local power supplier that began serving Dublin customers in 2018. In January 2022, standard residential accounts moved from an automatic default service “Bright Choice” which is 80 percent carbon free to EBCE’s “Renewable 100” product which is sourced from California wind and solar facilities. Non-residential customers will default to Renewable 100 beginning in October 2022.

City of Dublin General Plan

The City of Dublin’s General Plan contains the following policies associated with GHG emissions that are relevant to the project:

Energy Efficiency and Conservation in New Development

Guiding Policy 13.3.2.A:

1. Encourage the installation of alternative energy technology in new residential and commercial development.
2. Encourage designing for solar access.
3. Encourage energy efficient improvements be made on residential and commercial properties.

Implementing Policy 13.3.2.B

1. New development proposals shall be reviewed to ensure lighting levels needed for a safe and secure environment are provided - utilizing the most energy-efficient fixtures

(in most cases, LED lights) - while avoiding over-lighting of sites. Smart lighting technology (e.g. sensors and/or timers) shall also be employed in interior and exterior lighting applications where appropriate.

2. New development projects shall install LED streetlights in compliance with the City's LED light standard.
3. In new commercial and residential parking lots, require the installation of conduit to serve electric vehicle parking spaces to enable the easier installation of future charging stations.
4. Encourage the installation of charging stations for commercial projects over a certain size and any new residential project that has open parking (i.e. not individual, enclosed garages).
5. Encourage buildings (and more substantially, whole neighborhoods) to be designed along an east-west axis to maximize solar exposure. Where feasible, require new development projects to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use; and to use regenerative energy heating and cooling source alternatives to fossil fuels.
6. Continue to implement parking lot tree planting standards that would substantially cool parking areas and help cool the surrounding environment. Encourage landscaping conducive to solar panels in areas where appropriate.
7. Promote and encourage photovoltaic demonstration projects in association with new development.

Consider creating a recognition program for commercial or residential projects that install large-scale solar or wind energy systems and to publicly commend and acknowledge businesses or individuals that construct or remodel buildings that save more energy than required by Title 24 or by the Cal Green Building Code.

City of Dublin Climate Action Plan

The City of Dublin Climate Action Plan 2030 and Beyond (CAP 2030) establishes a vision for the City to reach carbon neutrality by 2045 and includes quantified actions the City will take to GHG emissions by 65,090 metric tons CO₂e by 2030. The CAP 2030 identifies additional actions that will need to be implemented to reach carbon neutrality.

The purpose of the CAP 2030 is to meet the State's 2030 GHG emissions reductions target of at least 40 percent below 1990 levels by 2030. The CAP 2030 identifies GHG reduction strategies and measures that relate to renewable and carbon-free energy, building efficiency and electrification, sustainable mobility and land use, materials and waste management, and municipal leadership. The City has determined that implementing all the measures in the CAP 2030 should reduce the impacts from activities under the CAP to a less than significant level under CEQA.

If a project were consistent with the applicable emissions reduction target, the project would be considered to have a less than significant impact due to GHG emissions and climate change consistent with Public Resources Code 21083.3 and CEQA Guidelines Sections 15183.5, 15064 and 15130.

Dublin Green Building Code

In 2009, the City adopted the Dublin Green Building Code (Municipal Code Chapter 7.94) requiring residential projects over 20 units to reach 50 points on the GreenPoint Rated system or achieve LEED for Homes. GreenPoint Rated is a green building program administered by the nonprofit organization Build It Green with assistance from StopWaste. The GreenPoint Rated system includes five categories: energy efficiency, resource conservation, indoor air quality, water conservation, and community. Currently the City enforces the 2019 California Green Building Standards Code with City amendments. The City is in the process of adopting the 2022 California Green Building Standards Codes.

10.5 Environmental Impacts and Mitigation Measures

10.5.1 Significance Thresholds

According to the adopted Appendix G of the *State CEQA Guidelines*, impacts related to GHG emissions from a project would be significant if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The Bay Area Air Quality Management District's (BAAQMD's) approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move towards climate stabilization. If a project would generate GHG emissions above the threshold level, it would be considered to contribute considerably to a significant cumulative impact. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate. If annual emissions of operational-related GHGs exceed these levels, the project would result in a cumulatively considerable contribution to a cumulatively significant impact to global climate change. BAAQMD's recommended thresholds are as follows: BAAQMD's recommended thresholds are as follows:

A. Projects must include, at a minimum, the following project design elements:

1. Buildings

- a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
- b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2. Transportation

- a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - i. Residential projects: 15 percent below the existing VMT per capita
 - ii. Office projects: 15 percent below the existing VMT per employee
 - iii. Retail projects: no net increase in existing VMT
 - b. Achieve compliance with electric vehicle requirements in the most recently adopted version of CALGreen Tier 2; and
- B. Be consistent with a local GHG Reduction Strategy that meets the criteria under the CEQA Guidelines section 15183.5(b) C

A qualified GHG Reduction Strategy adopted by a local jurisdiction should include the following elements as described in the State CEQA Guidelines Section 15183.5(b)(1):

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

It should be noted that the BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, the BAAQMD recommends quantification and disclosure of construction GHG emissions. The BAAQMD also recommends that the Lead Agency should make a determination on the significance of these construction generated GHG

emission impacts in relation to meeting AB 32 GHG reduction goals, as required by the Public Resources Code, Section 21082.2. The Lead Agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable.

For CEQA analyses, project-related GHG impacts can be categorized as either direct or indirect. Direct emissions refer to those emitted by stationary sources at the project site or caused by project activity on-site, and these emissions are normally within control of the project sponsor or applicant. Indirect emissions include those emissions that are not within the direct control of the project sponsor or applicant, but may occur as a result of the project, such as the motor vehicle emissions induced by the project. Indirect emissions include emissions from any off-site facilities used for project support as a result of the construction or operation of a project, and these emissions are likely to occur outside the control of the project far off-site or even outside of California.

Construction-phase GHG emissions are quantified as part of the air quality impact assessment (see [Chapter 6, Air Quality](#), and [Appendix B](#) for supporting calculations). These one-time emissions can be amortized over the life of the project to describe an equivalent annual emission rate. To amortize the construction emissions over the life of the project, the total GHG emissions due to construction are divided by a 30 year period. The amortized construction emissions can then be added to the annual operational GHG emissions.

The effects of the project are also considered based on whether the project implements reduction strategies identified in AB 32, SB 32, 2017 Scoping Plan, the Governor's Executive Order S-14-08, or other strategies to help reduce GHGs to the level proposed by the Governor. If so, it could reasonably follow that the project would not result in a significant contribution to the cumulative impact of global climate change.

Significance Classifications

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

10.5.2 Study Methodology

The project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2020.4.0 (CalEEMod). Details of the modeling assumptions and emission factors are provided in [Appendix B: CalEEMod Air Quality Analysis](#). However, with updated BAAQMD CEQA thresholds, quantification of emissions is not required. Emission amounts are provided for informational purposes. For construction, CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. The project's construction-related GHG emissions were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling, and vendor (material delivery) trucks, and worker vehicles.

The project's operations-related GHG emissions would be generated by vehicular traffic, area sources (e.g., landscaping maintenance, consumer products), electrical generation, natural gas consumption, water supply and wastewater treatment, and solid waste.

Details of the modeling assumptions and emission factors are provided in [Appendix B: CalEEMod Air Quality Analysis](#).

10.5.3 Summary of No and/or Beneficial Impacts

There are no "no" impacts or "beneficial" impacts.

10.5.4 Impact Analysis

Global climate change is, by definition, a cumulative impact of GHG emissions. Therefore, there is no project-level analysis.

Impact GHG-1: Would the project 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 reducing the emissions of greenhouse gases (Class III).

Project-Related Sources of Greenhouse Gas Emissions

The project would include direct and indirect GHG emissions. Direct operational-related GHG emissions for the project would include emissions from area and mobile sources, while indirect emissions are from energy consumption, water demand, and solid waste.

Construction Emissions

Construction of the project would result in direct emissions of CO₂, N₂O, and CH₄ from the operation of construction equipment and the transport of materials and construction workers to and from the project site. Construction GHG emissions are typically summed and amortized

over a 30-year period, then added to the operational emissions.¹⁰ It is reasonable to look at a 30-year time frame for buildings since this is a typical interval before a new building requires the first major renovation.¹¹ Total GHG emissions generated during all phases of construction were combined and are presented in **Table 10-3: Project Construction-Related Greenhouse Gas Emissions**. The CalEEMod outputs are contained within Appendix B, *Air Quality/Greenhouse Gas Emissions Data*. As shown in **Table 10-3**, the project would result in 34,189 MTCO₂e (1,140 MTCO₂eq/yr. when amortized over 30 years).

Table 10-3: Project Construction-Related Greenhouse Gas Emissions

Year	Emissions (MTCO ₂ e)
2023	3,188.67
2024	9,685.01
2025	10,645.51
2026	7,024.41
2027	2,728.98
2028	917.01
Total Construction Emissions	34,189.59
Annualized over 30 years	1,139.65

Notes:

MTCO₂e = metric tons of carbon dioxide equivalents

Source: CalEEMod Version 2020.4.0.

Operational Emissions

Operational or long-term emissions occur over the life of the project. GHG emissions would result from direct emissions such as project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power over the life of the project, the energy required to convey water to, and wastewater from the project site, the emissions associated with solid waste generated from the project site, and any fugitive refrigerants from air conditioning or refrigerators. **Table 10-4: Project Operation-Related Greenhouse Gas Emissions**, summarizes the total GHG emissions associated with project. As shown, the project would generate approximately 11,919.82 metric tons of CO₂e annually.

10 The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, August 26, 2009).

11 International Energy Agency, *Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings*, March 2008.

Table 10-4: Project Operation-Related Greenhouse Gas Emissions

Emissions Source	Emissions (MTCO ₂ e)
Area	8.11
Energy	1,354
Mobile	9,052.49
Waste	253.86
Water and Wastewater	111.74
Construction (annualized)	1,139.65
Total Operational Emissions	11,919.82

Notes:

MTCO₂e = metric tons of carbon dioxide equivalents

Source: CalEEMod Version 2020.4.0.

Area Source Emissions. Area source emissions were calculated using CalEEMod and project specific land use data. The primary GHG emission sources calculated by CalEEMod include hearths and landscape equipment. As noted in [Table 10-4](#), the project would result in approximately 8 MTCO₂e/year of area source GHG emissions.

Mobile Source. CalEEMod relies upon trip data as part of the transportation analysis and project specific land use data to calculate mobile source emissions. The project would directly result in approximately 9,052 MTCO₂e/year of mobile source-generated GHG emissions; refer to [Table 10-4](#).

Energy Consumption. Energy consumption emissions were calculated using CalEEMod and project-specific land use data. Electricity is provided by East Bay Community Energy (EBCE) and conveyed to customers through Pacific Gas and Electric's (PG&E) existing infrastructure. The project would indirectly result in approximately 1,354 MTCO₂e/year due to energy consumption; refer to [Table 10-4](#). It should be noted that Dublin electricity customers are automatically enrolled in community choice energy through EBCE, which would further reduce the energy emissions.

Water Demand. The project's water supply would be provided by local groundwater and imported surface water. Emissions from indirect energy impacts due to water treatment and transport would result in approximately 112 MTCO₂e/year; refer to [Table 10-4](#).

Solid Waste. Solid waste associated with operations of the project would result in approximately 254 MTCO₂e/year; refer to [Table 10-4](#).

It should be noted that the operational emissions are based on the 2019 Title 24 Part 6 (Building Energy Efficiency Standards) energy consumption rates. The standards also require

updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements that would cut residential energy use by more than 50 percent (with solar) and nonresidential energy use by 30 percent. The standards also encourage demand responsive technologies including battery storage and heat pump water heaters and improve the building's thermal envelope through high performance attics, walls and windows to improve comfort and energy savings (California Energy Commission, March 2018).

The proposed project would also comply with the appliance energy efficiency standards in Title 20 of the California Code of Regulations. The Title 20 standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances. The proposed project would be constructed according to the standards for high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems required in 2019 Title 24, Part 11 (CALGreen).

As noted above, the California Building Standards Commission adopted the 2022 Energy Code for inclusion into the California Building Standards Code. The latest building encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. The analysis conservatively uses 2019 Energy Code as the project would be required to comply with 2022 or later standards which would increase efficiency of buildings.

At the State and global level, improvements in technology, policy, and social behavior can also influence and reduce operational emissions generated by a project. The state is currently on a pathway to achieving the Renewable Portfolio Standards goal of 33 percent renewables by 2020 and 60 percent renewables by 2030 per SB 100. Despite these goals, the majority of the proposed project's emissions would still be from mobile and energy sources. Future mobile source emissions are greatly dependent on changes in vehicle technology, fuels, and social behavior, which can be influenced by policies to varying degrees. Due to these external factors, average emissions from transportation in 2050 would mostly still generate GHG emissions, but the quantity is uncertain in light of potential changes in technology and policy over the next 30 years.

The majority of project emissions (approximately 88 percent) would occur from mobile and energy sources. As noted above, energy and mobile sources are targeted by statewide measures such as low carbon fuels, cleaner vehicles, strategies to promote sustainable communities and improved transportation choices that result in reducing VMT, continued implementation of the Renewable Portfolio Standard (the target is now set at 60 percent renewables by 2030), and extension of the Cap and Trade program (requires reductions from industrial sources, energy generation, and fossil fuels).

The Cap and Trade program covers approximately 85 percent of California's GHG emissions as of January 2015. The statewide cap for GHG emissions from the capped sectors (i.e., electricity generation, industrial sources, petroleum refining, and cement production) commenced in 2013

and will decline approximately three percent each year, achieving GHG emission reductions throughout the program's duration. The passage of AB 398 in July 2017 extended the duration of the Cap and Trade program from 2020 to 2030. With continued implementation of various statewide measures, the proposed project's operational energy and mobile source emissions would continue to decline in the future.

The project would include additional energy efficiency and GHG reduction design features per City's Climate Action Plan, including eliminating the use of natural gas in new developments, LED streetlights, efficient outdoor lighting, options for photovoltaic solar systems, solar ready buildings, and drought tolerant and water efficient landscaping. Additionally, as described in Chapter 6 (Air Quality), implementation of **MM AQ-2.4: Wood Burning Fireplaces** would require the project to prohibit the use of wood burning devices (e.g., fireplaces, wood stoves) and ensure compliance with BAAQMD Regulation 6, Rule 3.

The project also reduces transportation GHG emissions by applying smart growth principles as an urban in-fill development with a mix of retail, entertainment, and residential uses adjacent to transit/multi-modal corridors and within two miles of a BART station. The project facilitates the use of existing bus routes with stops adjacent to the project site. As of May 2022, the Livermore Amador Valley Transit Authority (LAVTA) runs bus service from the project site (Dublin Boulevard and Tassajara Road) to the BART station with 30-minute headways.

Additionally, the project would improve and complete pedestrian and bicycle connections around its perimeter and through the project site. Bicycle storage would be provided in the multi-family buildings, as required, and bicycle racks would be provided near the commercial uses. The project would also improve and complete bicycle lanes and facilities along the perimeter and through the project site that connect with existing bicycle routes. As discussed in **Chapter 6: Air Quality**, the project would also implement **MM AQ-2.5: Vehicle Trip Reduction**, which would include a Transportation Demand Management (TDM) plan to reduce mobile GHG emissions for all uses.

Consistency with City of Dublin CAP 2030

The CAP 2030 identifies additional actions that will need to be implemented to reach carbon neutrality. The purpose of the CAP 2030 is to meet the State's 2030 GHG emissions reductions target of at least 40 percent below 1990 levels by 2030. The CAP 2030 identifies GHG reduction strategies and measures that relate to renewable and carbon-free energy, building efficiency and electrification, sustainable mobility and land use, materials and waste management, and municipal leadership. The CAP 2030 is a qualified GHG Reduction Strategy under CEQA, which can be used to determine the significance of GHG emissions from a project (CEQA Guidelines section 15183.5). BAAQMD also recognizes the use of a CAP as a significance threshold for a project's GHG emissions. Therefore, if the project is consistent with the CAP 2030, then the project would result in a less than significant cumulative impact to global climate change in 2030.

The City's CAP 2030 constitutes a qualified GHG Reduction Strategy and has been utilized in this analysis for determining the level of significance of the project's GHG emissions. The analysis of the project's cumulative contribution to climate change and GHG emissions is the analysis of the project's consistency with the applicable CAP 2030 measures that is provided in **Table 10-5: Project Consistency with the City of Dublin Climate Action Plan 2030 and Beyond Control Measures**. Thus, the project would help implement the CAP 2030, and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. A less than significant impact would occur in this regard.

Table 10-5: Project Consistency with Applicable City of Dublin Climate Action Plan 2030 and Beyond Control Measures

Control Measure	Description	Project Consistency
Strategy 1: 100% Renewable and Carbon-Free Electricity		
Measure CF-1: Opt-Up to 100% Renewable and Carbon-Free Electricity	The City of Dublin will set 100% renewable and carbon-free electricity as the default electricity for all Dublin customers served by East Bay Community Energy to unlock health and GHG emissions reduction benefits associated with carbon-free electricity.	Consistent. The City is the responsible party for this measure; however, the project would be required to comply with any associated standards or requirements.
Measure CF-2: Develop a Renewable Resource Buildout Plan	The City will leverage State and local funding and partnerships to develop local community solar projects in Dublin and investigate development of micro-grids to improve the resilience of the local electricity infrastructure.	Not applicable. The City is the responsible party for this measure. The project would be required to comply with any associated standards or requirements.
Strategy 2: Building Efficiency and Electrification		
Measure EE-1: Achieve All-Electric New Building Construction	Adopt an all-electric building reach code for new construction to reduce natural gas use and limit the development of new gas infrastructure in the City of Dublin.	Consistent. The City is the responsible party for this measure. However, the project would not include new natural gas infrastructure.
Measure EE-2: Implement the State Building Energy Disclosure Program	The City of Dublin will require all commercial and multifamily buildings covered by AB 802 to report energy use through the Energy Star Portfolio Manager tool.	Consistent. The project would require all commercial and multifamily buildings to report energy use through the Energy Star Portfolio Manager tool.
Measure EE-3: Streamline Battery Storage Permit Requirements	The City will ensure that permitting for the installation of new battery storage in residential and commercial buildings is streamlined and clear in order to promote the	Consistent. The City is the responsible party for this measure. The project would not conflict with implementation and would comply with the battery storage requirements in the latest building code.

Control Measure	Description	Project Consistency
	installation of additional energy storage capacity in Dublin.	
Measure EE-4: Develop an Existing Building Electrification Plan	Develop a plan to promote the retrofit of 22% of existing buildings in Dublin to all electric by 2030 and consider development of existing building electrification ordinances in the future.	Not applicable. This measure establishes countywide building retrofit measures and specifications for energy efficiency, water and resource conservation, and indoor air quality and health. As the project does not include existing structures, this measure does not apply.
Strategy 3: Sustainable Mobility and Land Use		
Measure SM-1: Adopt an Electric Vehicle Charging Station Ordinance	The City of Dublin will adopt an electric vehicle (EV) charging station ordinance for multifamily and commercial buildings to increase access to charging stations and promote the use of electric vehicles.	Consistent. The City is the responsible party for this measure; however, the project would be required to comply with any associated standards or requirements.
Measure SM-2: Develop an Electric Vehicle Infrastructure Plan	Develop an electric vehicle (EV) infrastructure plan to ensure that the City is optimally siting EV chargers and using the most beneficial program for publicly accessible EV chargers.	Consistent. The City is the responsible party for this measure; however, the project would be required to comply with any associated standards or requirements.
Measure SM-3: Develop a Transportation Demand Management Plan	Develop a comprehensive Transportation Demand Management (TDM) Plan for the City of Dublin. The TDM Plan will identify strategies to help facilitate the move from single-occupancy vehicles to less carbon intensive transportation modes.	Consistent. The City is the responsible party for this measure; however, the project would be required to comply with any associated standards or requirements. Additionally, the project includes MM AQ-2.5 Vehicle Trip Reduction that would include a TDM plan for both residential and non-residential uses to reduce air quality and GHG emissions, and encourage reduction in VMT.
Measure SM-4: Develop a Citywide Parking Management Plan	Develop a comprehensive Parking Management Plan that will specify parking requirements and costing that supports multi-modal transportation and a reduction in vehicle miles traveled.	Consistent. The City is the responsible party for this measure; however, the project would be required to comply with any associated standards or requirements.

Control Measure	Description	Project Consistency
Measure SM-5: Update the Bicycle and Pedestrian Master Plan	Update the Bicycle and Pedestrian Master Plan to contribute to the overall VMT reduction required to meet the City's climate goals. The plan will maximize the convenience and safety of active transportation within the City of Dublin.	Consistent. The City is the responsible party for this measure; however, the project would be required to comply with any associated standards or requirements. The project includes connections to existing bikeways and pedestrian pathways. Additionally, the project includes MM AQ-2.5 Vehicle Trip Reduction for both residential and non-residential uses, that includes provisions regarding bicycle facilities.
Measure SM-6: Continue to Prioritize Transit Oriented Development	Dublin has access to two BART stations and several LAVTA bus lines. Focusing higher density development and amenities around these transit stops can decrease VMT and GHG emissions generated within Dublin.	Not applicable. While the project is not located within a TOD area, it is 1.5 miles from the East Dublin / Pleasanton BART station and will provide high density mixed-uses near a transit stop.
Measure SM-7: Develop a Built Environment that Prioritizes Active Mobility	The City of Dublin will implement building standards that improve the pedestrian experience and create a built environment that prioritizes active mobility.	Consistent. The project includes various multi-use paths and walkways that connect the residents and retail patrons with adjacent open space, surrounding neighborhoods and nearby Emerald Glen Park. Additionally, the project includes walkways and connections between neighborhoods through the internal park system. The project provides a variety of open spaces for users.
Section 6.4: Strategy 4: Materials and Waste Management		
Measure MM-1: Achieve the Organic Waste Reduction Requirements of SB 1383	The City of Dublin will coordinate with community stakeholders to achieve the goal of organics comprising less than 9.35% of Dublin waste by 2025. Additionally, at least 20% of currently disposed edible food will be recovered for human consumption by 2025.	Consistent. The City is the responsible party for this measure. The project would be included in the City's organics program that includes curbside pickup of food waste and yard waste for residential neighborhoods.
Measure MM-2: Reduce the Embodied GHG Emissions Associated with Building Materials	The City of Dublin will require the use of low carbon concrete in new construction projects to reduce lifecycle GHG emissions and the embodied carbon associated with construction projects.	Consistent. The project would comply with the City's low carbon concrete requirements as they are adopted.

Control Measure	Description	Project Consistency
Section 6.5: Strategy 5: Municipal Leadership Measures		
Measure ML-1: 100% Renewable Electricity for Municipal Buildings and Operations	The City of Dublin's municipal government will help achieve GHG emission reduction goals related to municipal electricity use by opting-up all municipal accounts to 100% renewable electricity and expanding the City's battery storage capacity.	Not applicable. There are no municipal buildings associated with the proposed project.
Measure ML-2: Reduce Municipal Employee Commute GHG Emissions	The City of Dublin's municipal government will achieve its GHG emissions reduction and mobility goals by incentivizing municipal employee alternative transportation use as well as electric vehicle use.	Not applicable. The City is the responsible party for this measure. The project would not conflict with the City's ability to enact the measure.
Measure ML-3: Electrify Municipal Vehicle Fleet and Equipment	The City of Dublin's municipal government will electrify at least 33% of its municipal vehicle fleet and municipal maintenance equipment by 2030.	Not applicable. The City is the responsible party for this measure. The project would not conflict with the City's ability to enact the measure.
Measure ML-4: Total Cost of Ownership and Life-Cycle Analysis of GHG Impacts in Municipal Project Request for Proposals	The City of Dublin's municipal government will aim to ensure it is constructing projects with the lowest total cost of ownership and lowest GHG emissions for new construction projects through a requirement that all capital improvement projects include a life-cycle cost analysis and lifecycle GHG emissions analysis.	Not applicable. This is a municipal measure. The project would not conflict with the City's ability to enact the measure.
Measure ML-5: Promote Municipal Awareness of Sustainable Goods and Services	The City of Dublin's municipal government will achieve its materials and waste management goals by promoting awareness to City staff regarding the purchase of sustainable goods and services.	Not applicable. This is a municipal measure. The project would not conflict with the City's ability to enact the measure.
Measure ML-6: Enhance Municipal Carbon Sequestration Opportunities	The City of Dublin's municipal government will strive to increase carbon sequestration activities through tree planting and compost application throughout the City.	Not applicable. This is a municipal measure. The project would not conflict with the City's ability to enact the measure.
Measure ML-7: Implement the	The City of Dublin's municipal government will work to achieve its resilience goals through implementation of the City of	Not applicable. This is a municipal measure. The project would not conflict with the City's ability to enact the measure.

Control Measure	Description	Project Consistency
Green Stormwater Infrastructure Plan	Dublin Green Stormwater Infrastructure Plan.	

Source: City of Dublin Climate Action Plan 2030 and Beyond, 2020 and Kimley-Horn & Associates, 2022.

Consistency with the CARB Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, CARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan provides a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as the cap-and-trade program, and an AB 32 implementation fee to fund the program.

The latest CARB Climate Change Scoping Plan (2017) outlines the state's strategy to reduce state's GHG emissions to return to 40 percent below 1990 levels by 2030 pursuant to SB 32. The CARB Scoping Plan is mostly applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts. CARB is developing an updated 2022 scoping plan that has not been adopted.

The 2017 Scoping Plan Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the First Update to the Climate Change Scoping Plan (2013). Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions would be adopted as required to achieve statewide GHG emissions targets. As shown in **Table 10-5: Project Consistency with Applicable CARB Scoping Plan Measures**, the project is consistent with most of the strategies, while others are not applicable to the project.

Table 10-5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation	California Cap-and-Trade Program Linked to Western Climate Initiative	Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanism October	Not Applicable. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
		20, 2015 (CCR 95800)	consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
	California Light-Duty Vehicle Greenhouse Gas Standards	Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles	Consistent. This measure applies to all new vehicles starting with model year 2012. The project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the project would be required to comply with the Pavley emissions standards.
		2012 LEV III Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards	Consistent. The LEV III amendments provide reductions from new vehicles sold in California between 2017 and 2025. Passenger vehicles associated with the site would comply with LEV III standards.
	Low Carbon Fuel Standard	2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Sub article 7. Low Carbon Fuel Standard CCR 95480	Consistent. This measure applies to transportation fuels utilized by vehicles in California. The project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the project would utilize low carbon transportation fuels as required under this measure.
	Regional Transportation-Related Greenhouse Gas Targets.	SB 375. Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28	Consistent. The project would provide development in the region that is consistent with the growth projections in the Regional Transportation Plan/Sustainable Communities Strategy (SCS) (Plan Bay Area 2040).
	Goods Movement	Goods Movement Action Plan January 2007	Not applicable. The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
	Medium/Heavy-Duty Vehicle	2010 Amendments to the Truck and Bus Regulation, the	Consistent. This measure applies to medium and heavy-duty vehicles that operate in the state. The project would not conflict with implementation of this

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
		Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	measure. Medium and heavy-duty vehicles associated with construction and operation of the project would be required to comply with the requirements of this regulation.
	High Speed Rail	Funded under SB 862	Not applicable. This is a statewide measure that cannot be implemented by a project applicant or Lead Agency.
Electricity and Natural Gas	Energy Efficiency	Title 20 Appliance Efficiency Regulation	Consistent. The project would not conflict with implementation of this measure. The project would comply with the latest energy efficiency standards.
		Title 24 Part 6 Energy Efficiency Standards for Residential and Non-Residential Building	
		Title 24 Part 11 California Green Building Code Standards	
	Renewable Portfolio Standard/Renewable Electricity Standard.	2010 Regulation to Implement the Renewable Electricity Standard (33% 2020)	Consistent. The project would provide the option to home buyers to include photovoltaic solar systems. Photovoltaic systems would be installed on the rooftops of commercial buildings. All structures that do not include solar PV panels will be “solar ready,” as required by City Municipal Code sections 7.94.060 and 7.94.070. The project would obtain electricity from the electric utility PG&E. PG&E obtained 33 percent of its power supply from renewable sources in 2016. Therefore, the utility would provide power when needed on site that is composed of a greater percentage of renewable sources.
		SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	
	Million Solar Roofs Program	Tax incentive program	Consistent. This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. Homeowners within the project would be able to take advantage of incentives that are in place at the time of construction.
Water	Water	Title 24 Part 11 California Green Building Code Standards	Consistent. The project would comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use. The project would also comply with the City’s Water-Efficient Landscaping Regulations (Chapter 8.88 of the Dublin Municipal Code).
		SBX 7-7—The Water Conservation Act of 2009	

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
		Model Water Efficient Landscape Ordinance	
Green Buildings	Green Building Strategy	Title 24 Part 11 California Green Building Code Standards	Consistent. The State is to increase the use of green building practices. The project would implement required green building strategies through existing regulation that requires the project to comply with various CalGreen requirements. The project would include sustainability design features that support the Green Building Strategy.
Industry	Industrial Emissions	2010 CARB Mandatory Reporting Regulation	Not applicable. The project does not include industrial land uses.
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards AB 341 Statewide 75 Percent Diversion Goal SB 1383 Mandatory Organics Diversion	Consistent. The project would not conflict with implementation of these measures. The project is required to achieve the recycling mandates via compliance with the CALGreen code. The City has consistently achieved its state recycling mandates.
Forests	Sustainable Forests	Cap and Trade Offset Projects	Not applicable. The project site is in an area designated for urban uses. No forested lands exist on-site.
High Global Warming Potential	High Global Warming Potential Gases	CARB Refrigerant Management Program CCR 95380	Not applicable. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. The project is not expected to use large systems subject to the refrigerant management regulations adopted by CARB.
Agriculture	Agriculture	Cap and Trade Offset Projects for Livestock and Rice Cultivation	Not applicable. The project site is designated for urban development. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the project.

Source: California Air Resources Board (CARB), *California's 2017 Climate Change Scoping Plan*, November 2017 and CARB, *Climate Change Scoping Plan*, December 2008.

As discussed above, the Scoping Plan reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32.

Appendix B, Local Action, of the 2017 CARB Scoping Plan lists potential actions that support the State's climate goals. However, the Scoping Plan notes that the applicability and performance of the actions may vary across the regions. The document is organized into two categories (A) examples of plan-level GHG reduction actions that could be implemented by local governments and (B) examples of on-site project design features, mitigation measures, that could be required of individual projects under CEQA, if feasible, when the local jurisdiction is the lead agency. Many of these on-site project design features are included in the CAP.

The project would implement several Mitigation Measures included in the Air Quality Assessment during construction that would help reduce construction-related GHG emissions. For example, a few of the construction measures include enforcing idling time restrictions on construction vehicles, use of added exhaust muffling and filtering devices, replant vegetation in disturbed areas as quickly as possible, and posting a publicly visible sign with the telephone number and person at the lead agency to contact regarding dust complaints. As indicated above, GHG reductions are also achieved as a result of State of California energy and water efficiency requirements for new non-residential developments. These efficiency improvements correspond to reductions in secondary GHG emissions. Therefore, energy saving measures, such as Title 24, reduces GHG emissions from the power generation facilities by reducing load demand.

The project would be required to comply with existing regulations, including applicable measures from the City's General Plan and CAP 2030, or would be directly affected by the outcomes (vehicle trips and energy consumption would be less carbon intensive due to statewide compliance with future low carbon fuel standard amendments and increasingly stringent Renewable Portfolio Standards). As such, the project would not conflict with any other state-level regulations pertaining to GHGs.

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that operation of the project would benefit from implementation of current and potential future regulations (e.g., improvements in vehicle emissions, SB 100/renewable electricity portfolio improvements, etc.) enacted to meet an 80 percent reduction below 1990 levels by 2050. The CAP 2030 shows a path towards carbon neutrality by 2045.

Therefore, based on the above analysis, project related GHG emissions would not result in a cumulatively considerable contribution to the significant cumulative impact of climate change.

Consistency with Plan Bay Area

The project would be consistent with the overall goals of the Metropolitan Transportation Commission's *Plan Bay Area 2040* Regional Transportation Plan/Sustainable Communities Strategy in concentrating new development in locations where there is existing infrastructure as the project would develop the project site to provide a mix of land uses. The project is located approximately 1.5 miles of the Dublin/Pleasanton BART station, adjacent to I-580, other

major arterials, and bicycle lanes. The project includes various multi-use paths and walkways that connect the residents and retail patrons with adjacent open space, surrounding neighborhoods and nearby Emerald Glen Park. The project would provide housing and mixed uses on an infill location near transit. These project design features are consistent with the GHG reduction planning efforts and housing performance targets outlined in *Plan Bay Area 2040*. Therefore, the project would not conflict with the land use concept plan in *Plan Bay Area 2040* and impacts would be less than significant.

10.5.5 Level of Significance After Mitigation

Table 10-6: Summary of Impacts and Mitigation Measures – Greenhouse Gas Emissions summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to greenhouse gas emissions.

Table 10-6: Summary of Impacts and Mitigation Measures – Greenhouse Gas Emissions

Impact	Impact Significance	Mitigation
Impact GHG-1: Would the project 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 reducing the emissions of greenhouse gases (Class III).	Less than Significant	

10.6 References

Bay Area Air Quality Management District, *2017 CEQA Air Quality Guidelines*, 2017.

Bay Area Air Quality Management District, *Final 2017 Clean Air Plan*, 2017.

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California Air Resources Board, *Climate Change Proposed Scoping Plan*. 2008.

California Air Resources Board, *Greenhouse Gas for 2000-2019 — Trends of Emissions and Other Indicators*, July 2021.

California Air Resources Board, *California Greenhouse Gas Inventory for 2000-2010 — by Category Defined in the Scoping Plan*, 2013.

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City of Dublin. *Climate Action Plan 2030 And Beyond*, 2020.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: Synthesis Report, the Fourth IPCC Assessment Report. Available at: <http://www.ipcc-nggip.iges.or.jp/public/index.html>

Intergovernmental Panel on Climate Change (IPCC). 2014. Climate Change 2014: Synthesis Report, the Fifth IPCC Assessment Report. Available at: <https://www.ipcc.ch/report/ar5/>

US EPA. April 2018. Overview of Greenhouse Gases. Available at: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>

US EPA. April 2018. Inventory of U.S. Greenhouse Gas Emissions and Sinks. Available at: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2016>

11 Hazards & Hazardous Materials

11.1 Introduction

This section describes effects of hazards and hazardous materials that would result from implementation of the project. Information used to prepare this section came from the following resources:

- ENGEO Incorporated, *Phase I Environmental Site Assessment*, 2018 (see [Appendix E](#))
- City of Dublin, *General Plan*, 1985, as amended 2022
- City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022

11.2 Scoping Issues Addressed

During the public comment scoping period for the project, comments requesting analysis of the potential for hazards release, aerially deposited lead, sampling of backfill material, pesticides, and hazards in general were received.

11.3 Environmental Setting

This section presents information on the potential for hazardous conditions on the project site.

11.3.1 Hazardous Materials

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when handled, disposed, or otherwise managed improperly. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic – causes human health effects
- Ignitable – has the ability to burn
- Corrosive – causes severe burns or damage to materials
- Reactive – causes explosions or generates toxic gases

Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If handled, disposed, or otherwise handled improperly, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous material constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contain technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

11.3.2 Phase I Environmental Site Assessment

A Phase I ESA was prepared by ENGEO in January 2018 to determine the presence or absence of hazardous materials on the project site. This assessment included a review of local, state, tribal, and federal environmental record sources, standard historical sources, aerial photographs, fire insurance maps and physical setting sources. A reconnaissance of the property was conducted to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials and interviews with persons knowledgeable about current and past site use. The findings are summarized as follows.

Existing Conditions

The Phase I ESA identified 11 Federal USGS wells located within one mile of the project site. The closed well, Well Number 1, is located less than one-half-mile east-southeast of the property, and 20 groundwater level measurements were observed, which ranged between 34.9 feet and 36.9 feet below the ground.

No Recognized Environmental Conditions (RECs), historical RECs, nor controlled RECs were identified on the property. However, ENGEO identified the following conditions that could pose an environmental concern:

- One five-gallon bucket containing petroleum hydrocarbon material and one five-gallon bucket containing petroleum hydrocarbon spilt material (middle parcel APN 985-52-24).
- Approximately nine drums in poor condition (middle parcel APN 985-52-24).
- Minor stained soil with odors (middle parcel APN 985-52-24).
- Minor stressed vegetation under abandoned tractors (middle parcel APN 985-52-24).
- Solid waste debris (middle parcel AP: 985-52-24 and southern parcel APN 985-51-5).
- Abandoned Zone 7 water supply well (middle parcel APN 985-52-24).

Records Search

Environmental Data Resources, Inc. (EDR) performed a search of federal, State, and local databases listing contaminated sites, brownfield sites (a development site having the presence or potential presence of hazardous substance, pollutant, or contaminate), underground storage tank sites, waste storage sites, toxic chemical sites, contaminated well sites, clandestine drug lab sites, and other sites containing hazardous materials. The project site and adjacent sites were not listed on any databases.

Topographic Maps and Aerial Photographs

ENGEO reviewed historical USGS topographic maps and aerial photographs provided by EDR of the project site dating back to 1906. In the 1906 map, no structures were identified. Structures do appear in 1953 and disappear by 1998.

In the aerial photographs the project site was vacant or used as agricultural land in 1939 and four structures appear on the site in 1949. The site appears to have historically been used as agricultural row crops based on 1966 and 1968 aerial photographs.

Hazardous Building Materials

The Phase I ESA concluded that asbestos-containing materials and lead-based paint were not a concern because of the absence of buildings on the project site.

11.3.3 Livermore Municipal Airport

The Livermore Municipal Airport is located in the western portion of Livermore, immediately south of I-580, and approximately two miles from the project site. The airport is owned and operated by the City of Livermore.

The Livermore Executive Airport Land Use Compatibility Plan (ALUCP) indicates that 600 aircraft were based at the airport in 2008, with that number projected to increase to 900 by 2030. The airport averaged 394 operations per day in 2014 (143,810 operations annually).

Most of the project site, excluding the most northerly portion, is located within the Airport Influence Area (AIA)/Overlay Zoning District. This area is designated as an area in which current or future airport-related noise, overflight, safety and/or airspace protection factors may affect land uses or necessitate restrictions on those uses. The AIA is a designation in the ALUCP by the Alameda County Airport Land Use Commission.

As shown in [Figure 11-1: Livermore Municipal Airport Safety Compatibility Zones](#), the same portion of the project site is also located within Land Use Compatibility Zone 7 (Area of Influence) of the Livermore Municipal Airport, as established in the ALUCP.

11.4 Applicable Regulations, Plans, and Standards

The management of hazardous materials and hazardous wastes is regulated at federal, State, and local levels, including, among others, through programs administered by the U.S. Environmental Protection Agency (U.S. EPA); agencies within the California Environmental Protection Agency (CalEPA), such as the Department of Toxic Substances Control (DTSC); federal and state occupational safety agencies; and the Alameda County Department of Environmental Health. Regulations pertaining to flood hazards are discussed in [Chapter 12: Hydrology & Water Quality](#), and regulations for geologic and soil-related hazards are discussed in [Chapter 9: Geology and Soils](#).

11.4.1 Federal

Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The federal Toxic Substances Control Act of 1976 and Resource Conservation and Recovery Act (RCRA) established a program administered by the U.S. EPA for the regulation of the

generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (U.S. Code Title 42, Chapter 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (Title 40, Code of Federal Regulation [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Clean Water Act/SPCC Rule

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine Regional Water Quality Control Boards (RWQCBs). The project is within the jurisdiction of the San Francisco RWQCB.

Section 402 of the Clean Water Act authorizes the California State Water Resources Control Board to issue NPDES General Construction Storm Water Permit (Water Quality Order 99-08-DWQ), referred to as the “General Construction Permit.” Construction activities can comply with and be covered under the General Construction Permit provided that they:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off-site into receiving waters;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation; and

- Perform inspections of all BMPs.

NPDES regulations are administered by the RWQCB. Projects that disturb one or more acres are required to obtain NPDES coverage under the Construction General Permits.

As part of the CWA, U.S. EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, Part 112 (Title 40 CFR, Part 112) which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend and implement Spill Prevention and Countermeasures (SPCC) Plans. A facility is subject to SPCC regulations if a single oil (or gasoline, or diesel fuel) storage tank has a capacity greater than 660 gallons, the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “Navigable Waters” of the United States.

Occupational Safety and Health Administration

Occupational Safety and Health Administration’s (OSHA) mission is to ensure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in Title 29 CFR Part 1910.

OSHA’s Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) applies to five distinct groups of employers and their employees. This includes any employees who are exposed or potentially exposed to hazardous substances — including hazardous waste — and who are engaged in one of the following operations:

- Clean-up operations — required by a governmental body, whether federal, State, local, or other involving hazardous substances — that are conducted at uncontrolled hazardous waste sites;
- Corrective actions involving clean-up operations at sites covered by RCRA as amended (42 U.S.C. 6901 et seq.);
- Voluntary clean-up operations at sites recognized by federal, state, local, or other governmental body as uncontrolled hazardous waste sites;
- Operations involving hazardous wastes that are conducted at treatment, storage, and disposal facilities regulated by Title 40 Code of Federal Regulations Parts 264 and 265 pursuant to RCRA, or by agencies under agreement with U.S. EPA to implement RCRA regulations; and

- Emergency response operations for releases of, or substantial threats of releases of, hazardous substances regardless of the location of the hazard.

11.4.2 State

Hazardous Materials Release Response Plans and Inventory Act of 1985

The California Health and Safety Code, Division 20, Chapter 6.95, known as the Hazardous Materials Release Response Plans and Inventory Act or the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Businesses must submit this information to the County Environmental Health Division. The Environmental Health Division verifies the information and provides it to agencies responsible for protection of public health and safety and the environment. Business Plans are required to include emergency response plans and procedures in the event of a reportable release or threatened release of a hazardous material, including, but not limited to, all of the following:

- Immediate notification to the administering agency and to the appropriate local emergency rescue personnel.
- Procedures for the mitigation of a release or threatened release to minimize any potential harm or damage to persons, property, or the environment.
- Evacuation plans and procedures, including immediate notice, for the business site.
- Business Plans are also required to include training for all new employees, and annual training, including refresher courses, for all employees in safety procedures in the event of a release or threatened release of a hazardous material.

Hazardous Waste Control Act

The Hazardous Waste Control Act created the State hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The act is implemented by regulations contained in Title 26 of the CCR, which describes the following required aspects for the proper management of hazardous waste: identification and classification; generation and transportation; design and permitting of recycling, treatment, storage, and disposal facilities; treatment standards; operation of facilities and staff training; and closure of facilities and liability requirements. These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the DTSC.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) required the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a Certified Unified Program Agency (CUPA). The Program Elements consolidated under the Unified Program are Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs (a.k.a. Tiered Permitting); Aboveground Petroleum Storage Tank SPCC; Hazardous Materials Release Response Plans and Inventory Program (a.k.a. Hazardous Materials Disclosure or “Community-Right-To-Know”); California Accidental Release Prevention Program (Cal ARP); Underground Storage Tank (UST) Program; and Uniform Fire Code Plans and Inventory Requirements.

The Unified Program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. Most CUPAs have been established as a function of a local environmental health or fire department. Some CUPAs have contractual agreements with another local agency, a participating agency, which implements one or more Program Elements in coordination with the CUPA.

Department of Toxic Substance Control

Department of Toxic Substance Control (DTSC) is a department of Cal EPA and is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Government Code §65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services (DHS) lists of contaminated drinking water wells, sites listed by the California Water Resources Control Board as having UST leaks and have had a discharge of hazardous wastes or materials into the water or groundwater and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

California Office of Emergency Services

To protect the public health and safety and the environment, the California Office of Emergency Services (OES) is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. Basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and the health risks) needs to be available to firefighters, public safety officers, and regulatory agencies. The information must be included in these institutions’ business plans to prevent or mitigate the damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment.

These regulations are covered under Chapter 6.95 of the California Health and Safety Code Article 1– Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2– Hazardous Materials Management (Sections 25531 to 25543.3). CCR Title 19, Public Safety, Division 2, Office of Emergency Services, Chapter 4–Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for Hazardous Materials Business Plans (HMBP).

These plans shall include the following: (1) a hazardous material inventory in accordance with Sections 2729.2 to 2729.7; (2) emergency response plans and procedures in accordance with Section 2731; and (3) training program information in accordance with Section 2732. Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the State. Each business shall prepare a HMBP if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following: 500 pounds of a solid substance, 55 gallons of a liquid, 200 cubic feet of compressed gas, a hazardous compressed gas in any amount, or hazardous waste in any quantity.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

11.4.3 Local

City of Dublin General Plan

The City of Dublin General Plan contains the following policies associated with hazards and hazardous materials that are relevant to the project:

Guiding Policy 8.3.4.A.1: Maintain and enhance the ability to regulate the use, transport, and storage of hazardous materials and to quickly identify substances and take appropriate action during emergencies.

Guiding Policy 8.3.4.A.2: Minimize the risk of exposure to hazardous materials from contaminated sites.

Implementing Policy 8.3.4.B.2: As part of the City’s Comprehensive Emergency Response Plan, the City has adopted a Hazardous Materials Response Plan. The City will periodically review the Plan to prepare for and respond to emergencies related to hazardous materials.

Implementing Policy 8.3.4.B.3: Periodically review and enforce the City's ordinances regulating the handling, transport, and storage of hazardous materials and hazardous waste.

Implementing Policy 8.3.4.B.4: Require site-specific hazardous materials studies for new development projects where there is a potential for the presence of hazardous materials from previous uses on the site. If hazardous materials are found, require the clean-up of sites to acceptable regulatory standards prior to development.

Guiding Policy 8.4.1.A.1: All proposed land uses within the Airport Influence Area (AIA) shall be reviewed for consistency with the safety compatibility policies and airspace protection policies of the Airport Land Use Compatibility Plan (ALUCP) for the Livermore Municipal Airport.

Implementing Policy 8.4.1.B.1: Adopt an Airport Overlay Zoning District to ensure that all proposed development within the Airport Influence Area (AIA) is reviewed for consistency with all applicable Livermore Municipal Airport, Airport Land Use Compatibility Plan (ALUCP) policies.

Eastern Dublin Specific Plan

The City of Dublin's Eastern Dublin Specific Plan contains the following policy associated with hazards and hazardous materials that are relevant to the project:

Policy 11-1 Prior to issuance of building permits for site-specific Phase I (and if necessary Phase II) environmental site assessments shall be made available to the Community Development Director, with appropriate documentation that all recommended remediation actions have been completed.

Alameda County – Livermore Executive Airport Land Use Compatibility Plan

The Livermore Executive Airport Land Use Compatibility Plan (ALUCP) governs land use around Livermore Municipal Airport. The ALUCP was adopted by the Alameda County Airport Land Use Commission (ALUC) in 2012.

The ALUCP should act as a guide for the ALUC and local jurisdictions in safeguarding the general welfare of the public. The ALUCP establishes that the following "specific characteristics" are to be avoided: (1) glare or distracting lights that could be mistaken for airport lights; (2) sources dust, heat, steam, or smoke that may impair pilot vision; (3) sources of steam or other emissions that may cause thermal plumes or other forms of unstable air that generate turbulence within the flight path; (4) sources of electrical interferences with aircraft communications or navigation; or (5) features that create an increased attraction for wildlife including landfills or agricultural and recreational uses that attract large flocks of birds.

11.5 Environmental Impacts and Mitigation Measures

11.5.1 Significance Criteria

The following significance criteria for hazards & hazardous materials were derived from the Environmental Checklist in CEQA Guidelines Appendix G. An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria.

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 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.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- 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, create a significant hazard to the public or the environment.
- 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, result in a safety hazard or excessive noise for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Significance Classifications

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.**11.5.2 Summary of No and/or Beneficial Impacts****Hazards within 0.25 Mile of a School**

The nearest public school to the project site is Eleanor Murray Fallon Middle School, located .25 miles north of the project site. Kolb Elementary School is located 0.5 miles east of the project site. Emerald High School located at 3600 Central Parkway is currently under construction and Phase 1 is scheduled to be completed in early 2024. Located .25 miles east, it will be the nearest school to the project site. The project does not propose any industrial uses and the proposed residential and commercial uses would utilize commercially common chemicals (e.g. cleaning supplies) that are readily prevalent at schools and the surrounding community. Therefore, the project would not affect an existing or proposed school within the designated rate of one-quarter mile and this threshold is not evaluated further.

Listed Hazardous Material Site

The project site is also not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, this threshold is not evaluated further.

Emergency Response Plan

The project site is not located within the area of or within the direct vicinity of an emergency response plan. Therefore, this threshold is not further evaluated.

Wildland Fire

The project site is not located adjacent to wildlands that would put the property at risk for fires. Therefore, this threshold is not further evaluated.

11.5.3 Impacts of the Proposed Project**Impact HAZ-1: Exposure to known hazardous contaminants (Class II).**

The project site is currently undeveloped and has not supported urban development in the past. Although the Phase I ESA concluded there were no Recognized Environmental Conditions (RECs) or historical RECs on the site, the following deleterious materials were observed:

- One 5-gallon bucket of petroleum hydrocarbon containing material and one 5-gallon bucket of petroleum hydrocarbon containing spilt material (middle parcel APN 985-52-24).
- Approximately nine drums in poor condition (middle parcel APN 985-52-24).
- Minor stained soil with odors (middle parcel APN 985-52-24).
- Minor stressed vegetation under abandoned tractors (middle parcel APN 985-52-24).
- Solid waste debris (middle parcel AP: 985-52-24 and southern parcel APN 985-51-5).

- Abandoned Zone 7 water supply well (middle parcel APN 985-52-24).

Based on the land uses being proposed, the disturbance of these deleterious materials could result in the exposure of hazardous contaminants into the environment. This is considered a potentially significant impact. Implementation of **MM HAZ-1.1: Disposal of Deleterious Materials** would reduce this impact to less than significant.

Mitigation for Impact HAZ-1

MM HAZ-1.1 Disposal of Deleterious Materials.

Prior to any ground disturbance on the middle parcel (APN 985-52-24), the project applicant shall retain a qualified hazardous materials contractor to properly dispose of the observed deleterious materials, and any others discovered during remediation. Additionally, the applicant shall close the abandoned Zone 7 water supply well in accordance with applicable regulatory agency requirements.

Impact HAZ-2: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions. (Class III).

Project construction activities may involve the use, transport, and disposal of hazardous materials. These materials may include chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances used during construction. Construction of the project would also require the use of gasoline and diesel-powered heavy equipment, such as bulldozers, backhoes, water pumps, and air compressors. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, State, and local statutes and regulations regarding the transport, storage, and use of hazardous materials. Compliance with these statutes and regulations would ensure that human health and the environment are not exposed to hazardous materials.

The project would develop a mixed-use of commercial and residential uses on the project site. The project's end uses would not involve the routine use of large quantities of hazardous materials. Small quantities of hazardous materials would be used as part of daily operations, including cleaning solvents (e.g., degreasers, diesel, paint thinners, and aerosol propellants), paints, disinfectants, and fertilizers. These substances would be stored in secure areas and would be required to comply with all applicable regulatory requirements.

If future commercial users propose to use, handle, or store hazardous materials or waste in quantities that are regulated by the Alameda County Department of Environmental Health, they would be required to submit a Hazardous Materials Business Plan documenting basic information on the location, type, quality, and health risks of hazardous materials and/or

waste. Transport of these materials would be performed by commercial vendors who would be required to comply with applicable federal and state regulations.

For the residential portion of the project, there would be a less than significant impact to the transport, use or disposal of hazardous materials, since residential development does not use, store or transport significant quantities of hazardous materials. To the extent there are potentially hazardous materials used in construction, the impacts would be less than significant due to compliance with regulatory requirements, and no mitigation would be required.

Impact HAZ-3: Create aviation hazards for persons residing or working in the project area (Class III).

Most of the project site is located with the Airport Influence Area (AIA)/Overlay Zoning District. This area is designated as an area in which current or future airport-related noise, overflight, safety and/or airspace protection factors may affect land uses or necessitate restrictions on those uses.

The ALUP establishes that the following “specific characteristics” are to be avoided in the AIA: 1) Glare or distracting lights that could be mistaken for airport lights; 2) Sources of dust, heat, steam, or smoke that may impair pilot vision; 3) Sources of steam or other emissions that may cause thermal plumes or other forms of unstable air that generate turbulence within the flight path; 4) Sources of electrical interferences with aircraft communications or navigation; or 5) Features that create an increased attraction for wildlife including landfills or agricultural and recreational uses that attract large flocks of birds.

The project does not: 1) Propose any exterior lights that could be mistaken for airport lights; 2) Propose any uses or activities that emit substantial amounts of dust, heat, steam, or smoke; 3) Propose any uses or activities that would generate electrical interference; or 4) Have features that could attract large flocks of birds (e.g., a pond). Therefore, the project would be compatible with the flight hazards policies of the Airport Land Use Compatibility Plan and impacts would be less than significant.

Existing airport noise is addressed in **Chapter 14: Noise and Vibration**. The project’s location relative to the AIA would not result in significant noise exposure to future residents, businesses or employees.

11.5.4 Cumulative Impact Analysis

The geographical area for the analysis of cumulative impacts involving risks associated with hazards and hazardous materials is the is the project site and adjacent properties.

Impact HAZ-4: Contribute to cumulatively considerable impacts to hazards and hazardous materials (Class II).

Most hazards and hazardous materials impacts from development are site-specific and if properly designed would not result in additive worsening of the environmental or public health and safety. Cumulative development would be subject to site-specific hazards and/or hazardous materials constraints; pursuant to the City of Dublin's building requirements.

Nevertheless, development of past, present and reasonably foreseeable future developments could cumulatively increase the potential for exposure of people throughout the City of Dublin to existing soil contamination from ground disturbance during construction; hazards associated with the use, transport, or disposal of hazardous materials for any industrial projects; wildland fire hazards from development in a Fire Hazard Severity Zone; and compliance with the Alameda County Emergency Response and/or Evacuation Plans because of the addition of residents and employees in areas without adequate emergency access. Therefore, an overall increase in the potential for exposure to hazards, hazardous materials, and wildland fires could occur as development occurs. The project's potential contribution to this cumulative increase would be less than significant based on the primary site-specific nature of potential impacts, compliance with regulatory requirements, and implementation of **MM HAZ- 1.1: Disposal of Deleterious Materials**.

11.5.5 Level of Significance after Mitigation

Table 11-1: Summary of Impacts and Mitigation Measures – Hazards & Hazardous Materials summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to hazards and hazardous materials.

Table 11-1: Summary of Impacts and Mitigation Measures – Hazards & Hazardous Materials

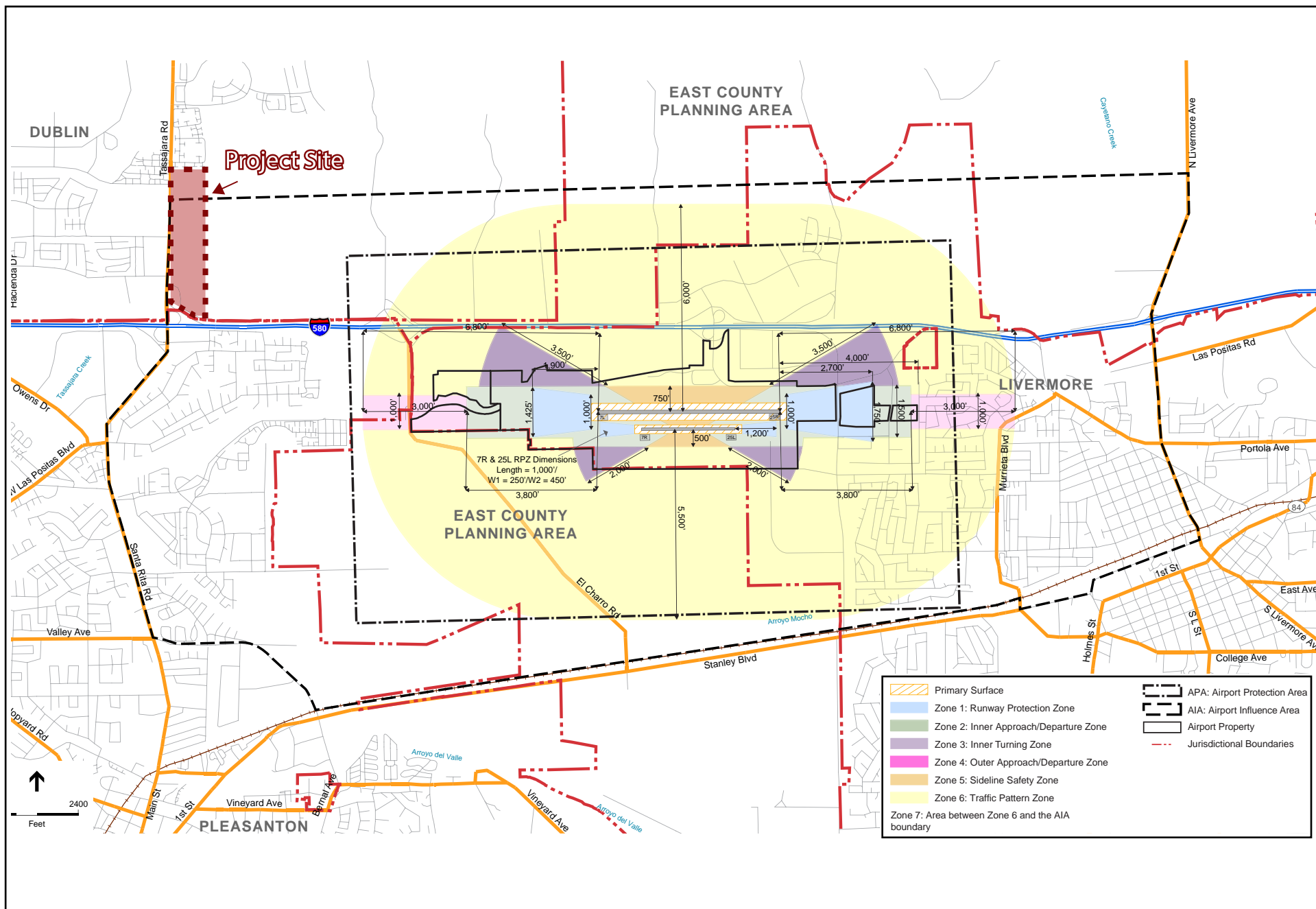
Impact	Impact Significance	Mitigation
Impact HAZ-1: Exposure to known hazardous contaminants (Class II).	Less than Significant with Mitigation	MM HAZ- 1.1: Disposal of Deleterious Materials.
Impact HAZ-2: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions. (Class III).	Less than Significant	None required.
Impact HAZ-3: Create aviation hazards for persons residing or working in the project area (Class III)	Less than Significant	None required.
Impact HAZ-4: Contribute to cumulatively considerable impacts to hazards and hazardous materials (Class II).	Less than Significant with Mitigation	MM HAZ- 1.1: Disposal of Deleterious Materials.

11.6 References

CAL FIRE (California Department of Forestry and Fire Protection). 2008. Very High Fire Hazard Severity Zones in LRA in Alameda County. Available at <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>. Accessed April 4, 2022.

City of Dublin. *Eastern Dublin Specific Plan* 1994, updated 2022.

County of Alameda. *Livermore Executive Airport Land Use Compatibility Plan*, 2012.



Source: Alameda County ALUC, 2012

Figure 11-1: Livermore Municipal Airport Safety Compatibility Zones
SCS Dublin Project
Environmental Impact Report



Not to scale

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12 Hydrology & Water Quality

12.1 Introduction

This chapter describes effects on water resources (hydrology and water quality) that would be caused by implementation of the project. Information used to prepare this chapter came from the following resources:

- Aerial/satellite photography
- Project application and related materials
- Dublin-San Ramon Services District, *2020 Urban Water Management Plan*, 2021

12.2 Scoping Issues Addressed

During the public comment scoping period for the project, one comment letter was received requesting analysis of planned potable water supply, wastewater connection, irrigation water supply, and hydrology and water quality in general.

12.3 Environmental Setting

This section presents information on the existing conditions of the project site and vicinity for hydrology and water quality.

12.3.1 Surface Water

Watershed

The project site is located within the Livermore Drainage Unit which is one of two major drainage basins in the Alameda Creek Watershed, and east of Tassajara Creek, which runs in a north-south direction. Tassajara Creek is a natural watercourse north of Interstate 580; but is channelized south of Interstate 580, prior to its convergence with Arroyo Mocho. Arroyo Mocho flows south to Arroyo De La Laguna, which empties into the San Francisco Bay.

The project site is located in the service area of the Dublin-San Ramon Services District (DSRSD), which serves the City of Dublin with potable water and non-potable recycled water. Alameda County Flood Control and Water Conservation District, known as Zone 7, supplies wholesale water to DSRSD.

Flooding

Flood Insurance Rate maps partition flood areas into three zones: Zone A for areas of 100-year flood; Zone B for areas of 500-year flood; and Zone C for areas of minimal flooding. The National Flood Insurance Program 100-year floodplain is considered the base flood condition. This is defined as a flood event of a magnitude that would be equaled or exceeded an average of once during a 100-year period. Floodways are defined as stream channels plus adjacent

floodplains that must be kept free of encroachment as much as possible so that the 100-year floods can be carried without substantial increases (no more than one foot) in flood elevations.

According to the Federal Emergency Management Agency (FEMA) mapped Flood Insurance Rate Map (FIRM), the majority of the project site is within Zone X (areas of the 0.2% annual chance flood; areas of one percent annual chance flood with average depth of less than one foot or with drainage areas less than one square mile; and areas protected by levees from 1% annual chance flood), except the southerly portion of PA-1, which lies within zone AH (flood depth of one to three feet) with a base flood elevation of 349.0. (FEMA, 2009). As shown in **Figure 12-1: Flood Hazard Areas**, the southerly portion of the project site is located within the 100-year floodplain.

12.3.2 Groundwater

The project is within the Livermore Valley Groundwater Basin which extends about 14 miles from the Pleasanton Ridge east to the Altamont Hills and about three miles from the Livermore Upland north to the Orinda Upland. Principal streams providing surface drainage include Arroyo Valle, Arroyo Mocho, and Arroyo Las Positas, with Alamo Creek, South San Ramon Creek, and Tassajara Creek as minor streams. All streams converge on the west side of the basin to form Arroyo de la Laguna, which flows south and joins Alameda Creek in Sunol Valley.

Some geologic structures restrict the lateral movement of groundwater, but the general groundwater gradient is to the west, then south towards Arroyo de la Laguna. Elevations within the basin range from about 600 feet in the east, near the Altamont Hills, to about 280 feet in the southwest, where Arroyo de la Laguna flows into Sunol Groundwater Basin. Average annual precipitation ranges from 16 inches on the valley floor to more than 20 inches along the southeast and northwest basin margins.

The floor of the Livermore Valley and portions of the upland areas on all sides of the valley overlie groundwater-bearing materials. The materials are continental deposits from alluvial fans, outwash plains, and lakes. They include valley-fill materials, the Livermore Formation, and the Tassajara Formation. Under most conditions, the valley-fill and Livermore sediments yield adequate to large quantities of groundwater to all types of wells. The quality of water produced from these rocks ranges from poor to excellent, with most waters in the good to excellent range.

Total storage capacity of the basin is estimated at about 500,000 acre-feet (af). Groundwater storage was estimated at 219,000 af in 1999.

Zone 7 has maintained an annual hydrologic inventory of supply and demand since 1974. The inventory describes the balance between groundwater supply and demand. Under average hydrologic conditions, the groundwater budget is essentially in balance. Groundwater budget inflow components include natural recharge of 10,000 acre-feet, artificial recharge of 10,900 af, applied water recharge of 1,740 acre-feet, and subsurface inflow of 1,000 af. Groundwater budget outflow components include urban extraction of 10,290 af, agricultural extraction of

190 af, other extraction and evaporation associated with gravel mining operations of 12,620 af, and subsurface outflow of 540 af.

Zone 7 extracts groundwater from the Livermore Valley Main Groundwater Basin (Main Basin) which contains high-yielding aquifers and good quality groundwater. The Main Basin has an estimated storage capacity of approximately 254,000 af. California Department of Water Resources (DWR) has not identified the Main Basin as a basin in overdraft or a basin expected to be in overdraft. The Main Basin is considered a storage facility and not a long-term source of water supply because Zone 7 only pumps groundwater it has artificially recharged using its surface water supplies.

DSRSD, the City of Pleasanton, the City of Livermore, and California Water Service Company have agreements with Zone 7 limiting their extraction of the long-term sustainable yield of the Main Basin. This agreement, along with Zone 7's other groundwater management activities, keeps the groundwater budget in balance under average hydraulic conditions. Each of these entities, known as retailers, has a groundwater pumping quota (GPQ) and are responsible for a fee if they pump in excess of their GPQ.

DSRSD groundwater supply is pumped by Zone 7 from Mocho well No. 4, a Zone 7 installed well located in the Mocho well field. Groundwater from Mocho No.4 is blended with water from other Zone 7 water supplies and is delivered to DSRSD to meet its total water demand. Zone 7 conducts a program of groundwater replenishment by recharging imported surface water via its streams ("in-stream recharge") for storage in the Main Basin. Zone 7's operational policy is to maintain the balance between the combination of natural and artificial recharge and withdrawal, ensuring that groundwater levels do not drop below the historic low level of 128,000 af. Zone 7 plans to recharge 9,200 afy on average, which means that Zone 7 can pump an equivalent 9,200 afy on average from the Main Basin.

12.4 Applicable Regulations, Plans, and Standards

12.4.1 Federal and State

Clean Water Act

Under the Clean Water Act of 1972, the United States Environmental Protection Agency (U.S. EPA) is authorized to regulate the discharge of pollutants in the waters of the United States and to regulate water quality standards for surface waters. The U.S. EPA has delegated authority for implementing water quality regulations to the California State Water Resources Control Board (State Water Board), which has nine Regional Water Quality Control Boards (RWQCB).

Porter-Cologne Water Quality Control Act

State Water Board regulates water quality through the Porter-Cologne Water Quality Act of 1969, which contains a complete framework for the regulation of waste discharges to both surface waters and groundwater of the state. On the regional level, the project falls under the

jurisdiction of the San Francisco Bay RWQCB, which is responsible for the implementation of state and federal water quality protection statutes, regulations and guidelines.

National Pollutant Discharge Elimination System

Pursuant to Section 402 of the CWA and the Porter-Cologne Water Quality Control Act, municipal storm water discharges in the City of Dublin are regulated under the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008, adopted May 11, 2022, and the San Francisco Bay Regional Water Quality Control Board (RWQCB) Transmittal of Order No. R2-2003-0032, Water Quality Certification and Waste Discharge Requirements, Dublin Ranch Project, dated April 22, 2003. Both NPDES permits are overseen by the RWQCB.

The City of Dublin is a member agency of the Alameda Countywide Clean Water Program, which assists municipalities and other agencies in Alameda County with implementation of the Municipal Regional Permit. Provision C.3 addresses post-construction stormwater management requirements for new development and redevelopment projects that add and/or replace 5,000 square feet or more of impervious area. Provision C.3 requires the incorporation of site design, source control, and stormwater treatment measures into development projects to minimize the discharge of pollutants in stormwater runoff and non-stormwater discharges, and to prevent increases in runoff flows. Low Impact Development (LID) methods are to be the primary mechanism for implementing such controls.

Municipal Regional Permit Provision C.3.g pertains to hydromodification management. This Municipal Regional Permit provision requires that stormwater discharges not cause an increase in the erosion potential of the receiving stream over the existing condition. Increases in runoff flow and volume must be managed so that the post-project runoff does not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force.

The Hydromodification Management Susceptibility Map developed by the Alameda Countywide Clean Water Program indicates that Dublin drains primarily to earthen channels; therefore, projects that create or replace one acre or more of impervious surface and increase impervious surface over pre-project conditions are subject to hydromodification management requirements.

In addition, projects disturbing more than one acre of land during construction are required to comply with the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002 (Construction General Permit). Construction General Permit activities are regulated at a local level by the RWQCB.

To obtain coverage under the Construction General Permit, a project applicant must provide a Notice of Intent, a Stormwater Pollution Prevention Plan (SWPPP), and other documents

required by Attachment B of the Construction General Permit. Activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as grubbing or excavation. The permit also covers linear underground and overhead projects such as pipeline installations.

The Construction General Permit uses a risk-based permitting approach and mandates certain requirements based on the project risk level (Level 1, 2, or 3). The project risk level is based on the risk of sediment discharge and the receiving water risk. The sediment discharge risk depends on project location and timing (such as wet season versus dry season activities). The receiving water risk depends on whether the project would discharge to a sediment-sensitive receiving water. The determination of the project risk level would be made by project applicants when the Notice of Intent is filed (and more details of the timing of the construction activity are known).

The performance standard in the Construction General Permit is that dischargers minimize or prevent pollutants in stormwater discharges and authorized non-stormwater discharges through the use of controls, structures, and best management practices (BMPs). A SWPPP must be prepared by a qualified SWPPP developer that meets the certification requirements in the Construction General Permit. The purpose of the SWPPP is: 1) to help identify the sources of sediment and other pollutants that could affect the quality of stormwater discharges, and 2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges resulting from construction activity. Operation of BMPs must be overseen by a qualified SWPPP practitioner who meets the requirements outlined in the permit.

Section 303(d) and Total Maximum Daily Loads

Section 303(d) of the Clean Water Act (CWA) requires each state to identify water bodies that are impaired, and which consequently require further action to support their beneficial uses. Once a water body is identified as impaired, the state is required to establish a Total Maximum Daily Load (TMDL) for each pollutant that is a source of impairment. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, which will ensure the protection of beneficial uses. The Basin Plan establishes TMDLs and the attainment strategies that need to be implemented to meet the standards. TMDL attainment strategies are implemented by the RWQCB through National Pollutant Discharge Elimination System (NPDES) permits.

National Flood Insurance Program

The National Flood Insurance Program (NFIP), implemented by the Congress of the United States in 1968, enables participating communities to purchase flood insurance. Flood insurance rates are set according to flood-prone status of property as indicated by FIRMs developed by FEMA. FIRMs identify the estimated limits of the 100-year floodplain for mapped watercourses, among other flood hazards. As a condition of participation in the NFIP, communities must adopt regulations for floodplain development intended to reduce flood damage for new

development through such measures as flood proofing, elevation on fill, or floodplain avoidance.

Senate Bill 610

Senate Bill (SB) 610 was passed on January 1, 2002, amending California state law to require detailed analysis of water supply availability for large development projects. An SB 610 Water Supply Assessment (WSA) must be prepared if the following three conditions are met: 1) the project is subject to CEQA under Water Code Section 10910; 2) the project meets criteria to be defined as a “Project” under Water Code Section 10912; and 3) the applicable water agency’s current Urban Water Management Plan (UWMP) does not account for the water supply demand associated with the project. A project would meet the definition of “Project” per Water Code Section 10912 if it is:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project (DWR, 2003b).

12.4.2 Local

City of Dublin General Plan

The City of Dublin General Plan establishes the following policies associated with hydrology and water quality that are relevant to the project:

Guiding Policy 7.3.1.A.1: Maintain natural hydrologic systems.

Implementing Policy 7.3.1.B.1: Enforce the requirements of the Municipal Regional Permit for stormwater issued by the San Francisco Bay Regional Water Quality Control Board or any subsequent permit as well as Chapter 7 (Public Works) and Chapter 9 (Subdivisions) of the Dublin Municipal Code for maintenance of water quality and protection of stream courses.

Implementing Policy 7.3.1.B.2: Review development proposals to ensure site design that minimizes soil erosion and volume and velocity of surface runoff.

Guiding Policy 12.3.5.A.1: Protect the quality and quantity of surface water and groundwater resources that serve the community.

Guiding Policy 12.3.5.A.2: Protect water quality by minimizing stormwater runoff and providing adequate stormwater facilities.

Guiding Policy 12.3.5.A.3: To minimize flooding in existing and future development, design stormwater facilities to handle design-year flows based on buildout of the General Plan.

Implementing Policy 12.3.5.B.1: Support Zone 7's efforts to complete planned regional storm drainage improvements.

Implementing Policy 12.3.5.B.2: With the goal of minimizing impervious surface area, encourage design and construction of new streets to have the minimum vehicular travel lane width possible while still meeting circulation, flow, and safety requirements for all modes of transportation.

Implementing Policy 12.3.5.B.3: Discourage additional parking over and above the required minimum parking standards for any land use unless the developer can demonstrate a need for additional parking.

Implementing Policy 12.3.5.B.5: Review design guidelines and standard details to ensure that developers can incorporate clean water runoff requirements into their projects.

Implementing Policy 12.3.5.B.6: Maximize the runoff directed to permeable areas or to stormwater storage by appropriate site design and grading, using appropriate detention and/or retention structures, and orienting runoff toward permeable surfaces designed to manage water flow.

Implementing Policy 12.3.5.B.7: Review development plans to minimize impervious surfaces and generally maximize infiltration of rainwater in soils, where appropriate. Strive to maximize permeable areas to allow more percolation of runoff into the ground through such means as bioretention areas, green strips, planter strips, decomposed granite, porous pavers, swales, and other water permeable surfaces. Require planter strips between the street and the sidewalk within the community, wherever practical and feasible.

Implementing Policy 12.3.5.B.8: Continue conducting construction site field inspections to ensure proper erosion control and materials/waste management implementation to effectively prohibit non-stormwater discharges.

Eastern Dublin Specific Plan

The City of Dublin's Eastern Dublin Specific Plan contains the following program associated with hydrology and water quality that are relevant to the project:

Program 6H: The City should enact and enforce an erosion and sedimentation control ordinance establishing performance standards to ensure maintenance of water quality and protection of stream channels. The ordinance should regulate grading and development activities adjacent to streams and wetland areas, and require revegetation of all ground disturbances immediately after construction to reduce erosion potential. Until such an ordinance is in place, the City shall require project applicants to provide a detailed erosion and sedimentation control plan as part of the project submittal.

12.5 Environmental Impacts and Mitigation Measures

12.5.1 Significance Criteria

The following significance criteria for hydrology & water quality were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address Lead Agency requirements and the full range of potential impacts related to this project.

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or ground water quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management of the basin.
- 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 that would: Result in a substantial erosion or siltation on- or off-site; Substantially increase the rate or amount of runoff in a manner which would result in flooding on-or off-site; 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 Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

12.5.2 Summary of No and/or Beneficial Impacts

Based on the site's location, it would not be subject to inundation by seiche, tsunami, or mudflow. Therefore, these thresholds are not evaluated further in this chapter.

12.5.3 Impacts of the Proposed Project

Impact HYD-1: Contribute to the depletion of local groundwater supplies or interfere with groundwater recharge (Class III).

The project could substantially deplete local groundwater supplies or interfere with groundwater recharge if it:

- Affected groundwater basin in overdraft conditions;
- Caused the affected groundwater basin to be in overdraft;
- Caused a substantial local groundwater level drawdown at wells in the area; or
- Redirected natural recharge to the basin, such as through the introduction of impervious areas that prevent infiltration.

As further described in **Chapter 16: Public Services, Utilities & Service Systems**, the project would generate a total water demand of approximately 225afy. The project water demand, inclusive of potable, recycled, and groundwater, would not be higher than the demand included for the project site in the DSRSD's 2020 UWMP. Therefore, the project would not exceed the capacity of the groundwater production system.

Furthermore, DWR has not identified the Main Basin as a basin in overdraft nor as a basin expected to be in overdraft. Thus, the project would not cause the groundwater basin to be in overdraft, and it would not result in substantial local groundwater level drawdown at wells in the area.

Given that the site is currently vacant and undeveloped, the project would result in a net increase in impervious surfaces on-site. An increase in impervious surfaces from the primarily

pervious existing condition could reduce groundwater recharge. Site acreage and impervious surface acreage includes building footprints, public and private street pavement, sidewalks, walkways and driveways. Pursuant to the Stormwater Control Plans to be prepared for the project, however, stormwater would be reduced through inclusion of bioretention, Silva Cells with bioretention, and landscaping throughout the project site that would allow infiltration of stormwater. These features would allow for infiltration and replenishment of the groundwater basin.

In conclusion, the project would not result in groundwater overdraft, substantial local groundwater level drawdown; or substantially redirect stormwater such that natural basin recharge would be precluded. Impacts to local groundwater would be less than significant (Class III).

Impact HYD-2: Increase stormwater runoff due to an increase in impervious surfaces (Class III).

The rate and amount of surface runoff is determined by multiple factors, including the following: amount and intensity of precipitation; amount of other imported water that enters a watershed; and amount of precipitation and imported water that infiltrates to the groundwater. Infiltration is determined by several factors, including soil type, antecedent soil moisture, rainfall intensity, the amount of impervious surfaces within a watershed, and topography. The rate of surface runoff is largely determined by topography and the intensity of rainfall over time. The project would not alter any precipitation amounts or intensities, nor would it require any additional water to be imported into the project site. However, construction would include earth-disturbing activities which may affect site-specific infiltration and permeability during construction (temporary) and operation (permanent).

The project would include a drainage system that would collect and convey runoff and ultimately discharge it to the City of Dublin's municipal storm drainage system. In accordance with the C.3 provision of the Municipal Regional Storm Water Permit (MRP) and the California Regional Water Control Board (RWQCB) Transmittal of Order No. R2-2003-0032, Water Quality Certification and Waste Discharge Requirements, Dublin Ranch Project, dated April 22, 2003, the project would be required to implement post construction stormwater treatment measures minimizing long term water quality impacts by using low impact development, site design and source control measures.

The Dublin Ranch West Side Storm Drain Benefit District, adopted March 18, 2008, allocated flow from watershed PA-1, PA-2 and PA-3 for design of the storm drain system that has since been constructed. Below is a summary of the allocated 15-year peak flows for the project:

- Watershed PA-1 = 24.52 cubic feet/second (cfs)
- Watershed PA-2a and 2b = 26.21 cfs
- Watershed PA-2c = 25.19 cfs

- Watershed PA-3 = 19.60 cfs
- Watershed PA-4 = not a part of the Dublin Ranch Master Drainage Watershed
- Watershed "Tassajara" = not a part of the Dublin Ranch Master Drainage Watershed

The majority of the project site, including parcels PA-2 and PA-3, as well as Dublin Boulevard, Central Parkway and Brannigan Street, is located within the Dublin Ranch Master Drainage Watershed. Most drainage from the project site is discharged into the existing underground storm drain system in the public streets surrounding the project site. The existing storm drain system has been previously constructed in accordance with the Dublin Ranch Drainage Master Plan infrastructure improvements. Thus, the watersheds and drainage connection points for each development parcel and surrounding public streets have been previously identified and hydraulically sized as part of the revised SWMP for Dublin Ranch (March 2003), and the Dublin Ranch Drainage Master Plan (March 2006).

As a part of the Dublin Ranch Drainage Master Plan improvements, a water quality/detention basin was constructed at the downstream end of the Dublin Ranch Development Watershed adjacent to Interstate 580. This water quality/detention basin treats stormwater runoff for the properties that were included in the Dublin Ranch Development Watershed, including parcels PA-2 and PA-3. The stormwater quality/detention pond was constructed to meet the mandates in California Regional Water Quality Control Board San Francisco Bay Region Order No. R2--2003-0031, Waste Discharge Requirements and Water Quality Certification for Dublin Ranch Project, Dublin and Livermore, Alameda County.

Impervious surface area within PA-1, PA-4, Gleason Drive and Tassajara Road were not included in the Dublin Ranch Drainage Master Plan, therefore full compliance to the MRP C.3 Requirements and Zone 7 Water Agency requirements shall be met within the project boundaries.

In accordance with MRP C.3 Requirements and Zone 7 flood control requirements, drainage for the project site would be designed to maintain the existing watershed drainage pattern and avoid any impact to downstream watersheds by reducing the post development runoff for the site to the predevelopment condition by incorporating low impact development features such as bioretention and Silva Cells to treat and reduce stormwater pollutants from entering into the municipal separate storm drain system. The grading design would maintain the north/south sloping layout of the land, matches existing grades along project perimeters, minimizes the use of retaining walls, while minimizing the earthwork cut and fill.

Although the project would increase the amount of impervious surface area within the project site, the use of on-site treatment and detention would prevent a substantial increase in stormwater flows. Furthermore, stormwater discharges from the project and other new developments in the City would be required to comply with the Construction General Permit, MRP Provision C.3 requirements, and incorporate appropriate site-specific LID and source and treatment control measures. Thus, the project would not result in an increase in stormwater

runoff due to an increase in impervious surfaces. Impacts would be less than significant (Class III).

Impact HYD-3: Substantially alter drainage patterns on- or off-site that would result in the storm water transport of contaminants, pollutants, bacteria, salts, and sediment into downstream facilities (Class III).

Regulations under three State stormwater permits are applicable to this impact: 1) The Municipal Regional Stormwater NPDES Permit Provision C.3 Requirements (MRP), 2) The California Regional Water Control Board (RWQCB) Transmittal of Order No. R2-2003-0032, Water Quality Certification and Waste Discharge Requirements, Dublin Ranch Project, dated April 22, 2003, and 3) The NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit).

Construction General Permit

Because the project would disturb more than one acre of land, the project applicant would be required to submit a Notice of Intent (NOI) to the State Water Resources Control Board and apply for coverage under the Construction General Permit. As part of the NOI application process a Stormwater Pollution Prevention Plan (SWPPP) must be submitted for review and approval prior to commencing construction.

In addition to potential sediment transport, construction activities require the use of gasoline- and diesel-powered heavy equipment, such as bulldozers, backhoes, water pumps, and air compressors and chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, and glues. An accidental release of any of these substances could degrade the quality of the surface water runoff and adversely affect receiving waters.

To address this potential impact, the project applicant is required to prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the requirements of the statewide Construction General Permit. The SWPPP shall be designed to address the following objectives:

- (1) All pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction activity are controlled;
- (2) Where not otherwise required to be under a Regional Water Quality Control Board permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- (3) Site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity; and

- (4) Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.

The SWPPP is required to be consistent with the BMP requirements as described in the most recent version of the California Stormwater Quality Association (CASQA) Stormwater Best Management Handbook-Construction or the Caltrans Stormwater Quality Handbook Construction Site BMPs Manual. The project applicant has prepared preliminary erosion control plans which follow CASQA guidelines and which includes silt fences, fiber rolls, drop inlet protection and curb inlet sediment barriers, and rock construction site entrances. Construction BMPs include soil preparation, hydroseeding, wind erosion control, water conservation practices, and stockpile management.

MRP Provision C.3 Requirements

The Municipal Regional Stormwater NPDES Permit (MRP) adopted by the RWQCB, requires the implementation of post construction stormwater treatment measures minimizing long term water quality impacts by using low impact development, site design and source control measures. Pursuant to the RWQCB requirements, the project applicant will be required to prepare a Preliminary Storm Water Management Plan (SWMP) for the project.

Given that the project would meet the water quality requirements required by the Construction General Permit, MRP Provision C.3 Requirements, and the California Regional Water Control Board (RWQCB) Transmittal of Order No. R2-2003-0032, Water Quality Certification and Waste Discharge Requirements, Dublin Ranch Project, dated April 22, 2003, the impact would be less than significant (Class III) and no mitigation is necessary.

Impact HYD-4: Place structures which would impede or redirect flood flows within a 100-year flood hazard area (Class III).

According to FIRM map number 06001C328G, the majority the project is outside of a 100-year flood hazard area. A portion of PA-1 is currently within the AH zone with a flood depth of 1-3 feet. As shown in **12-1: Flood Hazard Areas**, implementation of the project would include an import of soils to elevate structures within PA-1 above the 100-year flood elevation level; thus, as a part of the design process, the project applicant would seek a Conditional Letter of Map Revision (CLOMR) from FEMA. A CLOMR describes the changes that can be expected as a result of the project and states whether these changes would be in accordance with NFIP regulations.

In accordance with the comments and instructions provided in the CLOMR, the project applicant would initiate a request for a LOMR which would modify the associated FIRM map to show the elevation and hydrology alterations to the regulatory floodway resulting from the project. LOMR approval would be required prior to construction. The raised elevations within PA-1 and the associated CLOMR and LOMR process would reduce impacts to a less-than-significant level and no mitigation is required.

12.5.4 Cumulative Impact Analysis

The geographical area for cumulative hydrology impacts is the Alameda Creek Watershed.

Impact HYD-5: Contribute to cumulatively considerable impacts on hydrology and water quality (Class III).

Present and reasonably foreseeable future projects could contribute to cumulatively considerable impacts on hydrology and water quality, including an increase the amount of impervious surfaces in the area, which would decrease the area available for water percolation and groundwater recharge. However, the WSA for the project provides verification of sufficient water supply to satisfy the water demand of the project. Per the Urban Water Management Plan (UWMP), DSRSD has adequate water supply to meet demands of future projects during normal, dry, and multiple-dry years through 2035. UWMP water demand estimates, including groundwater, are based on the full General Plan build out of the municipalities within the DSRSD service area. Thus, the future water demand estimates would account for the water supply and potential demands of reasonably foreseeable future projects as well as the project.

Stormwater discharges from the project and other new developments in the City would be required to comply with the Construction General Permit, MRP Provision C.3 requirements, and the California Regional Water Control Board (RWQCB) Transmittal of Order No. R2-2003-0032, Water Quality Certification and Waste Discharge Requirements, Dublin Ranch Project, dated April 22, 2003 incorporate appropriate site-specific LID and source and treatment control measures. Compliance with these regulations would ensure that the project and other new developments would not increase stormwater runoff or substantially alter drainage patterns. The project, combined with present and reasonably foreseeable future projects, would result in less-than-significant cumulative impacts to stormwater quantity and water quality.

12.5.5 Level of Significance after Mitigation

Table 12-1: Summary of Impacts and Mitigation Measures – Hydrology & Water Quality summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to hydrology & water quality.

Table 12-1: Summary of Impacts and Mitigation Measures – Hydrology & Water Quality

Impact	Impact Significance	Mitigation
Impact HYD-1: Contribute to the depletion of local groundwater supplies or interfere with groundwater recharge (Class III).	Less than Significant	None required.
Impact HYD-2: Increase stormwater runoff due to the increase in impervious surfaces (Class II).	Less than Significant	None required.
Impact HYD-3: Substantially alter drainage patterns on- or off-site that would result in the storm water transport of pollutants, bacteria, salts, and sediment into downstream facilities (Class III).	Less than Significant	None required.
Impact HYD-4: Place structures which would impede or redirect flood flows within a 100-year flood hazard area? (Class III).	Less than Significant	None required.
Impact HYD-5: Contribute to cumulatively considerable effects on hydrology and water quality (Class III).	Less than Significant	None required.

12.6 References

CASQA (California Stormwater Quality Association). 2003. "Construction Handbook."

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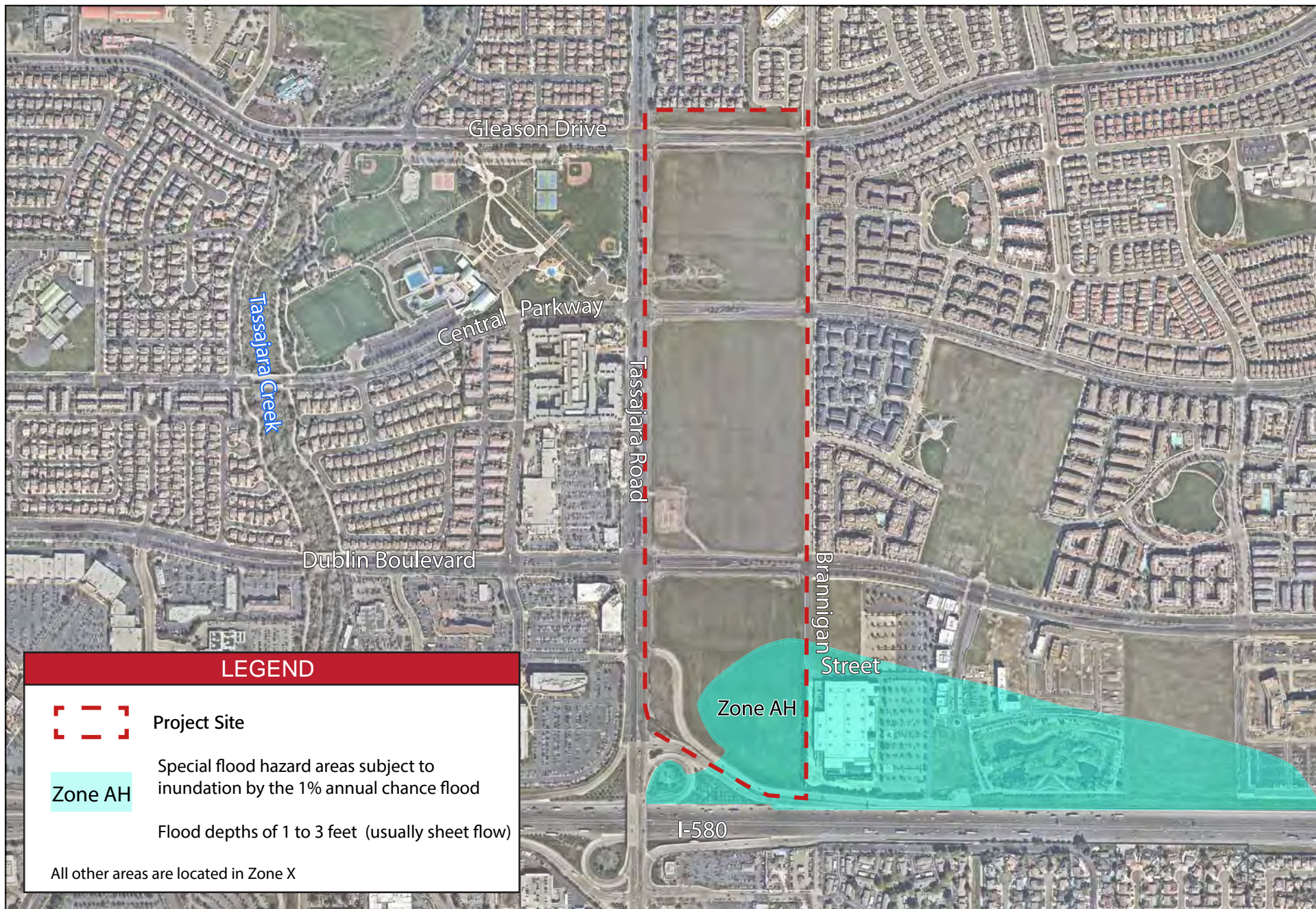
DWR (California Department of Water Resources). 2003. "Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to assist water suppliers, cities, and counties in integrating water and land use planning". Available at: https://digitalcommons.law.ggu.edu/caldocs_agencies/95/. Accessed April 4, 2022.

DWR (California Department of Water Resources). 2021. California's Groundwater Update 2020 (Bulletin 118). Available at https://data.cnra.ca.gov/dataset/calgw_update2020. Accessed April 4, 2022.

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https://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf. Accessed April 4, 2022.



Source: Kimley-Horn, 2022; FEMA, 2009

Figure 12-1: Flood Hazard Areas

SCS Dublin Project

Environmental Impact Report



Not to scale

Kimley»Horn

Expect More. Experience Better.

13 Land Use & Planning

13.1 Introduction

This section describes effects on land use and planning that would be caused by implementation of the project. Information used to prepare this section came from the following resources:

- City of Dublin, *General Plan*, 1985 as amended 2022
- City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022
- City of Dublin, *Municipal Code*
- Alameda County, *Livermore Executive Airport Land Use Compatibility Plan*, 2012

13.2 Scoping Issues Addressed

During the public comment scoping period for the project, a comment requesting general analysis of land use and planning was received.

13.3 Environmental Setting

This section presents information on the existing conditions of the project site and vicinity for land use.

13.3.1 Project Site Land Uses

The project site was previously used for agricultural purposes and has remained vacant, with exception to of seasonal uses and consists of low lying native and non-native grasses turned periodically for the purposes of weed abatement and fire hazard management. A small group of trees and shrubs is located near the corner of Tassajara Road and Central Parkway. No grading for development has occurred to date.

13.3.2 Land Uses in the Project Site Vicinity

West

Tassajara Road forms the western boundary of the project site. Medium density residential, parks/public recreation, general commercial, and campus office uses are located to the west.

North

Undeveloped land contemplated for future residential development form the northern boundary of the project site just north of Gleason Drive. Single family medium density residential uses are located to the north.

East

Brannigan Street forms the eastern boundary of the project site. A broad mix of land uses are located to the east including multi-family residential, general commercial, and a vacant parcel at the southeast corner of Dublin Boulevard and Brannigan Street

South

Interstate 580 forms the southern boundary of the project site. The City of Pleasanton is located south of the project site.

13.3.3 Livermore Municipal Airport

The Livermore Municipal Airport ¹² is located in the western portion of the City of Livermore, south of I-580 and approximately two miles southeast from the project site. The airport is owned and operated by the City of Livermore and features two parallel runways: 7L /25R and 7R/25L, 5,255 feet in length and 2,699 feet in length, respectively.

The majority of the project site is also located within Land Use Compatibility Zone 7 of the Airport Influence Area, as established in the Livermore Executive Airport Land Use Compatibility Plan.

13.4 Applicable Regulations, Plans, and Standards

Appendix G of the State CEQA Guidelines recommends the evaluation of a project's potential conflicts with: 1) Physically divide an established community, 2) Conflict with any applicable land use plan, policy or regulation of an agency having jurisdiction over a project adopted for the purpose of avoiding or mitigating an environmental effect; and 3) any applicable Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). Applicable local land use plans and ordinances for land use are described below. See [Chapter 6: Air Quality](#) for a discussion of the project's consistency with applicable federal, State, and local air quality plans.

13.4.1 Federal

Federal Aviation Regulations

The Federal Aviation Regulations (FAR), Part 77 – Safe, Efficient Use, and Preservation of Navigable Airspace, requires the Federal Aviation Administration (FAA) be noticed of proposed construction or alternation as described in FAR Part 77 Section 77.9. This pertains to any

¹² The City of Livermore refers to the airport as “Livermore Municipal Airport” while the Alameda County Airport Land Use Commission refers to the airport as “Livermore Executive Airport”. This EIR will refer to it as “Livermore Municipal Airport” except in instances where the “Livermore Executive Airport Land Use Plan” is discussed.

construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

- (1) 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport with its longest runway more than 3,200 ft. in actual length, excluding heliports.
- (2) 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport with its longest runway no more than 3,200 ft. in actual length, excluding heliports.
- (3) 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport.

Notice received by the FAA under this subpart is used to:

- (1) Evaluate the effect of the proposed construction or alteration on safety in air commerce and the efficient use and preservation of the navigable airspace and of airport traffic capacity at public use airports;
- (2) Determine whether the effect of proposed construction or alteration is a hazard to air navigation;
- (3) Determine appropriate marking and lighting recommendations, using FAA Advisory Circular 70/7460-1, Obstruction Marking and Lighting;
- (4) Determine other appropriate measures to be applied for continued safety of air navigation; and
- (5) Notify the aviation community of the construction or alteration of objects that affect the navigable airspace, including the revision of charts, when necessary.

13.4.2 State

State Aeronautics Act

The State Aeronautics Act requires each county with an airport to establish an Airport Land Use Commission to regulate land use around airports, to protect public safety and ensure that land uses near airports do not interfere with aviation operations. The Livermore Executive Airport Land Use Compatibility Plan regulates land use around Livermore Municipal Airport by requiring compliance with the applicable policies. In certain circumstances, local governments have the ability to override the decisions of the Airport Land Use Commission by a two-thirds vote.

13.4.3 Local

City of Dublin General Plan

The City of Dublin General Plan is the comprehensive planning document governing development within the City, and contains goals, policies, and programs describing the community's vision for economic viability, livable neighborhoods, and environmental protection.

The General Plan, as amended, establishes policies for the orderly growth and development of the City of Dublin. Among other purposes, the General Plan identifies policies necessary to protect and enhance those features and services which contribute to the quality of life of the community in which it serves.

The General Plan is a comprehensive policy plan which sets forth a series of written statements (goals, policies and objectives) defining the direction, character and composition of future land use development, and establishes guidelines (policies and actions) necessary to attain conformance with the plan. It is made up of 12 elements and various maps which accompany the elements. The elements are: 1) Land Use 2) Parks & Open Space 3) Schools, Public Lands & Utilities 4) Circulation & Scenic Highways, 5) Housing, 6) Conservation, 7) Seismic Safety & Safety, 8) Noise, 9) Community Design & Sustainability, 10) Economic Development, 11) Water Resources, 12) Energy Conservation. The General Plan Land Use Plan Map visually represents the physical relationship of all portions of the text, including development densities.

General Plans are reviewed annually and should be updated every three years to ensure that the most recent technical data, community goals and state law requirements are recognized. Major updates typically occur every 10 to 30 years, depending on changes in land use patterns, growth and development pressures, and new regulations.

As shown in [Figure 3-3: Existing General Plan Land Use Designations](#), the southern and western portions of the project site are designated General Commercial in the General Plan. The northern and eastern portions of the project site are designated Medium Density Residential, Public/Semi-Public, Medium/High Density Residential, and Neighborhood Commercial in the General Plan.

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan (EDSP) provides a framework to guide future land use and development decisions in eastern Dublin. It serves as an extension of the General Plan and can be used as both a policy and regulatory document. For projects within the EDSP area, policies and standards in the Specific Plan will take precedence over more general policies and standards applied throughout the rest of the city.

The project site is located within the following Planning Subareas of the EDSP: 1) Town Center – Commercial, along Tassajara Road south of Gleason Drive and north of Dublin Boulevard; 2) Town Center – Residential, along Brannigan Street south of Gleason Drive and north of Dublin

Boulevard; 3) Tassajara Gateway, area south of Dublin Boulevard; and 4) Foothill Residential for the small area of the project on the north side of Gleason Drive. The EDSP's description of the land use concept for each Subarea is described as follows:

Town Center – Commercial Subarea

This subarea represents the commercial core for eastern Dublin. The area is intended to be a high density, pedestrian-oriented commercial, civic, and entertainment center for Dublin and the surrounding communities. The subarea consists of two distinct parts; the General Commercial area and the Neighborhood Commercial area.

The General Commercial area, which extends along Tassajara Road, is intended to include uses with a broader market area and a greater orientation to the motoring public, including a full range of regional and community retail, service, office, and restaurant uses. Ideally, a major community shopping center, with supermarket, drug store, hardware store, liquor store, and other supporting retail and service uses would be located in this area.

Town Center – Residential Subarea

This subarea is generally located in the area bounded by Dublin Boulevard on the south, Fallon Road on the east, Gleason Drive on the north and Hacienda Drive on the west. The residential subarea is bisected by the Town Center--Commercial subarea. A community park and open space occupy the eastern portion of the subarea and residential is designated for the western portion.

Tassajara Gateway Planning Subarea

This subarea is located at the Tassajara Road interchange with I-580 and includes the areas on either side of Tassajara Road between I-580 and Dublin Boulevard. The land use concept for the Tassajara Gateway encourages the development of uses that will benefit from their location at the intersection of the area's two major east-west travel corridors (I- 580 and Dublin Boulevard) with the major north-south corridor (Tassajara Road). The area is favored for uses that depend on the location's high visibility and convenient vehicular access. Uses which fit these criteria might include activities such as hotels, campus office, conference center, restaurants, and quality regional retail.

Foothill Residential Subarea

This subarea includes most of the Specific Plan area north and east of the Town Center subarea. Land use in this subarea is predominantly single-family residential. Other uses include schools and parks.

East Alameda County Conservation Strategy

The East Alameda County Conservation Strategy (EACCS) is a guidance document intended to provide a framework to protect, enhance, and restore natural resources in eastern Alameda County, while improving and streamlining the environmental permitting process for impacts resulting from infrastructure and development studies. The City of Dublin adopted the EACCS

as its guidance document for public projects and uses the document to provide input for managing biological resources and conservation priorities during project-level planning and environmental planning. For privately sponsored development projects such as this project, proponents are encouraged to consult the EACCS for guidance, but compliance with the document is not mandatory.

Alameda County - Livermore Executive Airport Land Use Compatibility Plan

The Livermore Executive Airport Land Use Compatibility Plan (ALUCP) governs land use around Livermore Municipal Airport. This Plan was adopted by the Alameda County Airport Land Use Commission (ALUC) in 2012.

The ALUCP should act as a guide for the ALUC and local jurisdictions in safeguarding the general welfare of the public. To guide future development, the ALUCP provides compatibility criteria for noise, safety and airspace protection.

As stated in the ALUCP, in comparison to noise, safety is in many respects a more difficult concern to address in airport land use compatibility policies. The primary reason for this difference is that safety policies address uncertain events which *may occur with occasional* aircraft operations, whereas noise policies deal with known, quantifiable, and more or less predictable events which *do occur with every* aircraft operation.

In regard to airspace protection whether a particular object constitutes an airspace obstruction depends upon the height of the object relative to the runway elevation and its proximity to the airport. The acceptable height of objects near an airport is most commonly determined by application of standards set forth in Federal Aviation Regulation Part 77.

13.4.4 Zoning

The City of Dublin Zoning Ordinance implements the General Plan and Specific Plans and to guide and manage the future growth of the city in accordance with those plans. As shown in **Figure 3-4: Existing Zoning**, the project site is designated Planned Development (PD) per Resolution No. 104-94, which was adopted as part of the EDSP. This PD Pre-zoning allowed for the annexation of 1,538 acres.

The purpose of the PD is to allow flexibility to encourage innovative development while ensuring that the goals, policies and action programs of the General Plan and Eastern Dublin Specific Plan are met. In particular, the PD is intended to implement the following policies:

1. Allow and encourage mixed use residential and commercial development in order to meet specific housing and employment needs, reduce vehicular trips, and foster pedestrian access to shopping and employment areas.
2. Concentrate development on less environmentally and visually sensitive or constrained portions of the plan area and preserve significant open space areas and natural and topographic landscape features with minimum alteration of land forms.

3. Encourage innovative approaches to site planning, building design and construction to create housing products for all segments of the community, including commercial and office structures.
4. Encourage higher intensity development near transit corridors.
5. Create an attractive, efficient and safe environment.
6. Develop an environment that encourages social interaction and the use of common open areas for neighborhood or community activities and other amenities.
7. Create an environment that decreases dependence on the private automobile.

13.5 Environmental Impacts and Mitigation Measures

13.5.1 Significance Criteria

The following significance criteria for land use & planning were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address Lead Agency requirements and the full range of potential impacts related to this project.

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria.

- Physically divide an established community.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Significance Classifications

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

13.5.2 Summary of No and/or Beneficial Impacts

Physically Divide an Established Community

The project would not physically divide an established community because it is located in within the City limits and would be compatible with surrounding land uses. In addition, existing roadway connections to the surrounding community would be maintained. Therefore, there would be no impact.

The environmental effects related to compatibility between proposed on-site land uses and adjacent land uses during both construction and operation are described in the respective impact section of the following environmental resource chapters: Aesthetics, Air Quality, Greenhouse Gas Emissions, Noise, and Transportation and Circulation.

13.5.3 Impacts of the Proposed Project

Impact LU-1: Substantially conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (Class III)

General Plan/Specific Plan Amendment

As shown in [Figure 3-5: Proposed General Plan Land Use Designations](#), the project would include a General Plan/Specific Plan amendment that would re-designate the project site from six to five land use designations. With City Council approval of the project and certification of the EIR, the project would be consistent with applicable land use plan, policy, and regulations. And environmental impacts would be less than significant and no mitigation is required.

Ordinances and Regulations

The project would be required to comply with all applicable City of Dublin ordinances and regulations.

The Top Golf netting and support poles would be up to 190 feet in height and therefore require review by the Federal Aviation Administration (FAA) in accordance with FAR Part 77. Section 2.6.2.f. of the Alameda County Airport Land Use Plan (ALUP) recommends review by the Airport Land Use Commission (ALUC) for projects that involve “Any obstruction reviewed by the FAA in accordance with FAR Part 77 that receives a finding other than ‘not a hazard to air navigation’.” However, if the proposed project receives a finding from the FAA of “not a hazard to air navigation,” no ALUC review is required.

13.5.4 Cumulative Impact Analysis

The geographic area for the analysis of cumulative impacts to land use and planning is the greater EDSP area, where land use changes could interact with land use changes under the project to result in cumulative effects.

Impact LU-2: Contribute to cumulatively considerable land use impacts (Class III).

Land use impacts would be cumulatively considerable if the project, in conjunction with other past, present, reasonably foreseeable future projects, would be designed or otherwise conditioned to maintain consistency with adopted land use plans and ordinances or be amended with the appropriate mitigation and conditions of approval.

As described above, the project, with implementation of the General Plan amendment, would be consistent with the City's General Plan and the EDSP. All feasible mitigation measures to address environmental impacts of the project have been described in this EIR.

Implementation of future projects requiring a change in the General Plan land use designation would require discretionary approval, similar to this project review and approval process. It is reasonably assumed that these projects would be designed or otherwise conditioned to maintain consistency with adopted land use plans and ordinances or be amended with the appropriate mitigation and conditions of approval.

As described above, the project would be consistent with applicable land use goals, policies and objectives of the General Plan. Mitigation measures to address potential environmental impacts of the project have been included in this EIR. Given the project's consistency, as well as the potential for other projects in the cumulative impact scenario to be generally consistent with the land use policy framework, overall cumulative land use consistency impacts would be less than significant.

13.5.5 Level of Significance after Mitigation

Table 13 -1: Summary of Impacts and Mitigation Measures – Land Use & Planning summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to land use & planning.

Table 13-1: Summary of Impacts and Mitigation Measures – Land Use & Planning

Impact	Impact Significance	Mitigation
Impact LU-1: Substantially conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (Class III).	Less Than Significant	None required.
Impact LU-2: Contribute to cumulatively considerable land use impacts (Class III).	Less Than Significant	None required.

13.6 References

Alameda County, *Livermore Executive Airport Land Use Compatibility Plan*, 2012.

City of Dublin, *General Plan*, 1985 as amended 2022.

City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022.

City of Dublin, *Municipal Code*.

Code of Federal Regulations. Available at <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-E/part-77>. Accessed April 4, 2022.

14 Noise & Vibration

14.1 Introduction

This section describes the potential noise effects that would be caused by implementation of the project. Information used to prepare this section came from the following resources:

- Project application and related materials
- City of Dublin, *General Plan*, 1985 amended 2022
- City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022
- 2022 Noise Analysis Technical Data (Appendix F)

14.2 Scoping Issues Addressed

During the public comment scoping period for the project, a comment requesting analysis of project construction noise was received.

14.3 Environmental Setting

This section presents information on the existing conditions of the project site and vicinity for noise and vibration.

14.3.1 General Information on Noise

To describe environmental noise and to assess impacts on areas sensitive to community noise, a frequency weighting measure that simulates human perception is customarily used. The frequency weighting scale known as A-weighting best reflects the human ear's reduced sensitivity to low frequencies and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. In general, a difference of more than 3 dBA is a perceptible change in environmental noise, while a 5 dBA difference typically causes a change in community reaction. An increase of 10 dBA is perceived by people as a doubling of loudness.

As shown in [Table 14-1: Typical A-Weighted Noise Levels](#), people experience a wide range of sounds in the environment. Excessive noise is not only undesirable but may also cause physical and/or psychological damage. The amount of annoyance or damage caused by noise is dependent primarily upon: the amount and nature of the noise, the amount of ambient noise present before the intruding noise, and the activity of the person working or living in the area. Environmental and community noise levels rarely are of sufficient intensity to cause irreversible hearing damage, but disruptive environmental noise can interfere with speech and other communication and be a major source of annoyance by disturbing sleep, rest, and relaxation.

Table 14-1: Typical A-Weighted Noise Levels

Noise Level (dBA)	Indoor Noise Source	Outdoor Noise Source
0	(Lowest Threshold of Human Hearing)	(Lowest Threshold of Human Hearing)
10-20	Broadcast/ recording studio	
30	Library Bedroom at night, concert hall (background)	Quiet rural nighttime
40	Theater, large conference room (background)	Quiet urban/ suburban nighttime
50	Dishwasher in next room	Quiet urban daytime
60	Large business office	Heavy traffic at 300 feet
70	Vacuum cleaner at 10 feet Normal Speech at 3 feet	Noisy urban area, daytime Gas lawnmower, 100 feet Commercial area
80	Garbage disposal at 3 feet	Diesel truck at 50 feet at 50 mph
90	Food blender at 3 feet	Gas lawn mower at 3 feet
100		Jet fly-over at 1,000 feet
110	Rock band	

Source: California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013

Decibels are logarithmic units that conveniently compare the wide range of sound intensities to which the human ear is sensitive. Therefore, the cumulative noise level from two or more sources will combine logarithmically, rather than linearly (i.e., simple addition). For example, if two identical noise sources produce a noise level of 50 dBA each, the combined noise level would be 53 dBA, not 100 dBA. Sound is generally propagated by spherical spreading according to the “inverse square law,” where the sound energy decreases with the square of the distance. As such, the sound pressure level would be reduced by 6 decibels per doubling of distance from a ground-level stationary or point source. For a noise source which is relatively long, such as a constant stream of highway traffic (line source), the sound pressure spreads at a rate of three decibels per doubling of distance. At very large distances, beyond several hundred feet, wind and temperature gradients influence sound propagation. Changes in noise levels due to wind are generally short-term without persistent directional winds, where some hours may be one or two decibels louder than others within the margin of precision of this assessment.

The community noise environment and the consequences of human activities cause noise levels to be widely variable over time. For simplicity, sound levels are usually best represented by an equivalent level over a given time period (Leq) or by an average level occurring over a 24-hour period. The Leq, or equivalent sound level, is a single value for any desired duration, which includes all of the time-varying sound energy in the measurement period, usually 1 hour. Given

the sensitivity to noise increases during evening and nighttime hours when people are trying to sleep, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time sounds. The Community Noise Equivalent Level, CNEL, is a measure of the day-night noise exposure, with a 5-decibel penalty added to evening sounds (7:00 p.m. to 10:00 p.m.) and a 10 dBA addition to nighttime sounds (10:00 p.m. to 7:00 a.m.). The Ldn, or day-night average sound level, is equal to the 24-hour equivalent sound level (in dBA) with a 10 decibel penalty applied to nighttime sounds occurring between 10:00 p.m. and 7:00 a.m.

Community noise levels are closely related to the intensity of human activity and land use. Noise levels are generally considered low when ambient levels are below 45 dBA Leq, moderate in the 45 to 60 dBA Leq range, and high above 60 dBA Leq. In wilderness areas, the Ldn noise levels can be below 35 dBA. In small towns or wooded and lightly used residential areas, the Ldn is more likely to be approximately 50 or 60 dBA. Levels of approximately 75 dBA Leq are more common in busy urban areas (e.g. downtown Los Angeles), and levels up to 85 dBA Leq occur near major freeways and airports.

Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, the surrounding land uses dictate what noise levels would be considered acceptable or unacceptable. Lower levels are expected in rural or suburban areas than what would be expected for commercial or industrial zones. Nighttime ambient levels in urban environments are about seven decibels lower than the corresponding daytime levels. In rural areas, away from roads and other human activity, the day-to-night difference can be considerably less. Areas with full-time human occupation that are subject to nighttime noise are often considered objectionable because of the likelihood of disrupting sleep. Noise levels higher than 45 dBA Ldn at night can result in the onset of sleep interference effects. At 70 dBA Ldn, sleep interference effects become considerable (U.S. EPA, 1974).

14.3.2 General Information on Vibration

Sources of groundborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g. factory machinery) or transient (e.g. explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude, including Vibration Decibels (VdB), peak particle velocity (PPV), and the root mean square (RMS) velocity. VdB is the vibration velocity level in the decibel scale. PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 14-2: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals,

vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Table 14-2: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations

Maximum PPV (inch/sec)	Vibration Annoyance Potential Criteria	Vibration Annoyance Potential Criteria	FTA Vibration Damage Criteria
0.008	-	Extremely fragile historic buildings, ruins, ancient monuments	-
0.01	Barely Perceptible	-	-
0.04	Distinctly Perceptible	-	-
0.1	Strongly Perceptible	Fragile buildings	-
0.12	-	-	Buildings extremely susceptible to vibration damage
0.2	-	-	Non-engineered timber and masonry buildings
0.25	-	Historic and some old buildings	-
0.3	-	Older residential structures	Engineered concrete and masonry (no plaster)
0.4	Severe	-	-
0.5	-	New residential structures, Modern industrial/commercial buildings	Reinforced-concrete, steel, or timber (no plaster)

PPV = peak particle velocity; inch/sec = inches per second; FTA = Federal Transit Administration

Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2020; and Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per second (inch/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

14.3.3 Project Setting

The *City of Dublin General Plan Noise Element* (Noise Element), Figure 9-1: 2011 Existing Noise Exposure Contours, shows contours of 70 and 75 dB near I-580, 60 and 65 dB along Dublin

Boulevard, 60 and 65 dB along Tassajara Road, and 60 dB along Gleason Drive. Noise Element Figure 9-2: 2035 Projected Noise Exposure Contours, shows projected noise contours in 2035 and shows an increase to 70 dB along Dublin Boulevard.

The primary sources of stationary noise in the project vicinity are those associated with the operations of adjacent residential uses to the north and east, as well as commercial uses to the east and west. The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise.

14.3.4 Sensitive Receptors

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are treated as the most sensitive to noise intrusion and therefore have more stringent noise exposure targets than other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance.

The closest sensitive receptors to the project site include residential uses located adjacent to the north, east, and west.

14.3.5 Existing Ambient Noise Measurements

To quantify existing ambient noise levels in the project area, Kimley-Horn and Associates conducted four short-term noise measurements on April 13, 2022 (see [Appendix F](#) and [Figure 14-1: Noise Measurement Locations](#)). Meteorological conditions consisted of cool temperatures (53 degrees Fahrenheit [F]), calm winds under six miles per hour (mph), and clear skies. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. The 10-minute measurements were taken between 11:00 a.m. and 12:30 p.m. The noise measurements were taken during the midday hours, as the midday hours typically have the highest daytime noise levels in urban environments. The sound level meter and microphone were mounted on a tripod five feet above the ground. Short-term (Leq) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in [Table 14-3: Existing Noise Measurements](#).

Table 14-3: Existing Noise Measurements

Site No.	Location	L _{eq} (dBA)	L _{min} (dBA)	L _{max} (dBA)	Peak	Time
1	East of project site, within residential neighborhood located at 4650 Rimini Court	49.7	42.3	65.4	86.6	11:08 am
2	North of project site, within residential neighborhood located at 5086 Osborne Circle	53.4	36.2	73.7	100.5	11:45 am
3	West of project site, within residential neighborhood located at 4865 Swinford Court	57.3	42.9	68.9	90.7	12:04 pm
4	East of project site, within residential neighborhood located at 4093 Clarinbridge Circle	52.5	45.6	67.6	79.9	10:40 am

Source: Kimley-Horn and Associates, 2022

As shown in **Table 14-3: Existing Noise Measurements**, the ambient recorded noise levels ranged from 49.7 dBA to 57.4 dBA Leq near the project site. The maximum noise levels in the project vicinity ranged from 65.4 dBA to 73.7 dBA. The field survey noted the most commonly present noises in the project vicinity are produced by automotive vehicles (cars, trucks, buses, and motorcycles) on local roadway traffic and landscaping equipment. Traffic moving along streets and freeways produces a sound level that remains relatively constant and is therefore a component of the City's minimum ambient noise level. Vehicle noise varies with the volume, speed, and type of traffic. Slower traffic produces less noise than fast moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with some vehicles, including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity, and honking of horns. These noises add to urban noise and are regulated by a variety of agencies (as described below).

14.3.6 Existing Roadway Noise Levels

Existing roadway noise levels were calculated for the roadway segments in the project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and existing traffic volumes from the transportation analysis. The noise prediction model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (also referred to as energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data indicates that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along roadway segments in proximity to the project site are included in **Table 14-4: Existing Traffic Noise Levels**.

Table 14-4: Existing Traffic Noise Levels

Roadway Segment	ADT	CNEL at 100 feet from Centerline of Roadway (dBA)
Hacienda Drive		
Central Parkway to Dublin Boulevard	13,530	62.3
Dublin Boulevard to I-580 WB Off Ramp	33,050	66.4
I-580 WB Off Ramp to I-580 EB Off Ramp	37,540	66.6
I-580 EB Off Ramp to Owens Drive	45,340	68.9
Tassajara Road		
Fallon Road to Gleason Drive	25,250	67.3
Gleason Drive to Aviano Way	23,410	67.0
Aviano Way to Project Driveway	23,410	67.0
Project Driveway to Central Parkway	23,410	67.0
Central Parkway to Project Driveway (South Entry Level Townhomes)	27,290	67.8
Project Driveway (South Entry Level Townhomes) to Finnian Way	27,850	67.9
Finnian Way to Project Driveway (Affordable Housing)	27,100	67.9
Project Driveway (Affordable Housing) to Dublin Boulevard	27,100	67.9
Dublin Boulevard to Northside Drive	38,450	69.2
Northside Drive to I-580 WB Off-Ramp	39,360	69.2
I-580 WB Off-Ramp to Pimlico Drive	48,660	70.1
Saint Rita Road		
I-580 WB Off-Ramp to Pimlico Drive	38,050	69.0
Brannigan Street		
Gleason Drive to Aviano Way	3,250	53.4
Aviano Way to Central Parkway	3,700	54.0
Central Parkway to Finnian Way	2,200	51.8
Finnian Way to Project Driveway (South Family Homes)	3,140	53.3
Project Driveway (South Family Homes) to Dublin Boulevard	3,140	53.3
Dublin Boulevard to Project Driveway (Commercial)	2,040	51.4

Roadway Segment	ADT	CNEL at 100 feet from Centerline of Roadway (dBA)
Fallon Road		
Tassajara Road to Gleason Drive	14,050	63.6
Gleason Drive to Central Parkway	21,530	65.5
Central Parkway to Dublin Boulevard	25,190	67.4
Dublin Boulevard to I-580 WB Off Ramp	28,670	67.9
I-580 WB Off Ramp to I-580 EB Off Ramp	24,540	67.1
I-580 EB Off Ramp to W Jack London Boulevard	23,640	65.9
Gleason Drive		
Tassajara Road to Project Driveway	9,410	61.7
Project Driveway to Brannigan Street	9,410	61.7
Brannigan Street to Grafton Street	7,170	60.6
Grafton Street to Fallon Road	6,960	60.5
Central Parkway		
Hacienda Drive to Tassajara Road	7,110	59.2
Tassajara Road to Project Driveway (North Side)	9,040	60.3
Project Driveway (North Side) to Brannigan Street	9,040	60.3
Brannigan Street to Montalcino Street/Chancery Lane	7,940	59.7
Montalcino Street/Chancery Lane to Grafton Street	7,340	59.3
Grafton Street to Fallon Road	6,670	58.9
Dublin Boulevard		
Hacienda Drive to Tassajara Road	27,760	68.0
Tassajara Road to Project Driveway (South Family Homes)	24,740	67.3
Project Driveway (South Family Homes) to Brannigan Street	24,740	67.3
Brannigan Street to Grafton Street	21,530	66.9
Grafton Street to Keegan Street	19,610	66.5
Keegan Street to Lockhart Street	13,640	64.9
Lockhart Street to Fallon Road	14,570	65.2

Notes: ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level.

Data source: Based on traffic data within the transportation analysis for the SCS Dublin Project, prepared by Kimley-Horn, 2022. Refer to [Appendix F](#) for traffic noise modeling assumptions and results.

Source: Kimley-Horn and Associates, 2022

As depicted in [Table 14-4: Existing Traffic Noise Levels](#), the existing traffic-generated noise levels on project-vicinity roadways currently ranges from 51.4 to 70.1 dBA CNEL. As previously described, CNEL is 24-hour average noise level with a 5 dBA “weighting” during the hours of 7:00 a.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

14.4 Applicable Regulations, Plans, and Standards

14.4.1 State

California Building Code

Title 24 of the California Code of Regulations contains standards for allowable interior noise levels associated with exterior noise sources. The standards apply to new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family residences. The standards require interior noise level attributable to exterior sources not exceed 45 dBA CNEL in any habitable room. Multi-family residential structures proposed where the CNEL would exceed 60 dBA requires an acoustical analysis showing that the proposed building design would achieve the prescribed allowable interior noise standard.

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or Ldn) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or Ldn) of at least 45 dBA.

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act, find that excessive noise is a serious hazard to public health and welfare, and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The Act also finds that there is a continuous and increasing bombardment of noise in urban, suburban, and rural areas. The California Noise Control Act declares that the State has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare.

14.4.2 Local

City of Dublin General Plan

The Noise Element of the City of Dublin General Plan establishes residential, commercial, and industrial land use compatibility standards for noise measured at the property line of the receiving land use. The land use compatibility noise criteria provide the basis for decisions on location of land uses in relation to noise sources and for determining noise mitigation requirements.

Table 14-5: Land Use/Noise Compatibility Matrix shows the City of Dublin's Land Use Compatibility for Community Noise Environments standards for specific land uses. As indicated, the normally acceptable exterior noise level is 70 dBA CNEL or less for office, retail, and commercial land uses (the types of land uses proposed for development with implementation of the project). Noise levels over 75 dBA CNEL are considered normally unacceptable for new development of these types of land uses. For residential land uses, the normally acceptable exterior noise level is 60 dBA CNEL or less and noise levels over 70 dBA CNEL are considered normally unacceptable.

Table 14-5: Land Use/Noise Compatibility Matrix

Land Use Category	Normally Acceptable	Conditionally Acceptable*	Normally Unacceptable	Clearly Unacceptable
Residential	60 or less	61-70	71-75	Over 75
Motels, hotels	60 or less	61-70	71-80	Over 80
Schools, churches, nursing homes	60 or less	61-70	71-80	Over 80
Neighborhood parks	60 or less	61-65	66-70	Over 70
Offices: retail commercial	70 or less	71-75	76-80	Over 80
Industrial	70 or less	71-75	Over 75	

Notes:

*Conditionally acceptable exposure requires noise insulation features in building design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Source: City of Dublin General Plan Noise Element, 1993, as amended. Table 9.1

General Plan Policies

The City of Dublin General Plan establishes the following policies associated with noise and vibration that are relevant to the project:

Guiding Policy 9.2.1.A.1: Where feasible, mitigate traffic noise to levels indicated by Table 9.1: Land Use Compatibility for Community Noise Environments.

Implementing Policy 9.2.1.B.4: Noise impacts related to all new development shall be analyzed by a certified acoustic consultant.

Implementing Policy 9.2.1.B.5: Request demonstration of ability to mitigate noise prior to approval of light rail or bus service in the Southern Pacific Right-of-Way Transportation Corridor.

A depressed rail line or noise walls close to the tracks could make light rail a good neighbor.

Implementing Policy 9.2.1.B.6: Review all multi-family development proposals within the projected 60 CNEL contour for compliance with noise standards (45 CNEL in any habitable room) as required by State law.

Because the General Plan designates almost all residential sites subject to 60 or greater CNEL for multifamily development, this standard will be effective in Dublin. Project designers may use one or more of four available categories of mitigation measures: site planning, architectural layout (bedrooms away from noise source, for example), noise barriers, or construction modifications.

Implementing Policy 9.2.1.B.7: Review all non-residential development proposals within the projected CNEL 65 dBA contour for compliance with exterior noise transmission standards as required by the California Green Building Standards Code.

The noise element specifies that project designers may use one or more of four available categories of mitigation measures: site planning, architectural layout (bedrooms away from noise source, for example), noise barriers, or construction modifications.

Eastern Dublin Specific Plan

The City of Dublin's Eastern Dublin Specific Plan establishes the following policy associated with noise and vibration that are relevant to the project:

Policy 6-44: Require development along the I-580 frontage to provide adequate mitigation to conform to the State Land Use Compatibility Standards for noise and policies and standards in the City of Dublin's Noise Element.

City of Dublin Municipal Code

Noise regulations listed in the City of Dublin's Municipal Code are enacted for the purpose of securing and promoting the public health, comfort, safety, welfare, and prosperity and the peace and quiet of the city and its inhabitants. The goal is to maintain and preserve the quiet atmosphere of the city, and to implement programs and enact legislation consistent with the objectives and goals set forth in the Noise Element of the General Plan and aimed at retaining noise levels throughout the city acceptable values established in the General Plan.

Code Section 5.28.020 prohibits any person within the City to from making any loud, or disturbing, or unnecessary, or unusual or habitual noise or any noise which annoys or disturbs or injures or endangers the health, repose, peace or safety of any reasonable person of normal sensitivity present in the area. Section 8.36.060(C)(3) states that lots less than 5,000 square feet with mechanical equipment that generates noise (such as swimming pool, spa, and air

conditioning equipment) on the property shall be enclosed as necessary to reduce noise at the property line to a maximum of 50 dBA at any time. For lots 5,000 square feet or larger, mechanical equipment that generates noise when located within a required setback as allowed by this subsection, and within 10 feet of an existing or potential residence, or an existing paved patio area on adjoining property, shall be enclosed as necessary to reduce noise at the property line to a maximum of 50 dBA at any time.

14.5 Environmental Impacts and Mitigation Measures

14.5.1 Significance Criteria

CEQA does not define what construction or operational noise level increase would be considered substantial. Typically, a noise increase of 3 dBA Ldn or greater at a residential receptor would be considered significant when existing ambient noise levels are between 60 and 65 dBA Ldn (FICON, 1992). A noise increase of 5 dBA Ldn or greater at the receptor would be considered a significant impact when existing ambient noise levels are less than 60 dBA Ldn (FICON, 1992). Noise due to construction activities is usually considered to be less than significant in terms of CEQA compliance if the construction activity is temporary and the use of heavy construction equipment and noisy activities are limited to daytime hours. As indicated above, the City of Dublin does not have separate noise standards for construction.

The following significance criteria for noise were derived from the Environmental Checklist in CEQA Guidelines Appendix G.

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria.

- Generate 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 (refer to Impact N-1).
- Generate excessive groundborne vibration or groundborne noise levels (refer to Impact N-2).
- 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. (refer to Impact N-3).

Significance Classifications

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

Impacts Assessment Methodology

Construction

Construction noise estimates are based upon noise levels on typical noise levels generated by construction equipment published by the Federal Transit Administration (FTA) and Federal Highway Administration (FHWA). Construction noise is assessed in dBA L_{eq} . This unit is appropriate because L_{eq} can be used to describe noise level from operation of each piece of equipment separately, and levels can be combined to represent the noise level from all equipment operating during a given period. The FTA's *Transit Noise and Vibration Impact Assessment Manual* (2018) (FTA Noise and Vibration Manual) identifies a maximum 8-hour noise level standard of 80 dBA L_{eq} at residential uses and 90 dBA L_{eq} at commercial and industrial uses for short-term construction activities.

Construction noise modeling was conducted using the FHWA Roadway Construction Noise Model (RCNM). Reference noise levels are used to estimate noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Construction noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise. As noted above, the City of Dublin does not establish quantitative construction noise standards and therefore, this analysis conservatively uses the FTA's threshold of 80 dBA (8-hour L_{eq}) for residential uses and 90 dBA (8-hour L_{eq}) for non-residential uses to evaluate construction noise impacts. The construction noise modeling assumptions and outputs are provided in [Appendix F](#) of this EIR.

Operational

The analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. Reference noise level data are used to estimate the project operational noise impacts from stationary sources. Noise levels are collected from field noise measurements and other published sources from similar types of activities are used to estimate noise levels expected with the project's stationary sources. The reference noise levels are used to represent a worst-case noise environment as noise levels from stationary sources can vary throughout the day.

Traffic noise impacts are assessed using the U.S. Federal Highway Traffic Noise Prediction Model (FHWA-RD-77-108). Model input data includes without- and with-project average daily traffic volumes on adjacent roadway segments, day/night percentages of autos, medium and heavy trucks, vehicle speeds, ground attenuation factors, and roadway widths. The roadway speeds are based on the posted speed limits observed during site visits. The model analyzed the noise impacts from the nearby roadways onto the project vicinity, which consists of the area that has the potential of being impacted from the on-site noise sources as well as the project-generated traffic on the nearby roadways. The roadway traffic model input assumptions are presented in [Appendix F](#).

Vibration

Groundborne vibration levels associated with construction-related activities for the project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from FTA published data for construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, considering the distance from construction activities to nearby land uses and typically applied criteria for structural damage and human annoyance.

14.5.2 Summary of No and/or Beneficial Impacts

There are no “no” impacts nor “beneficial” impacts.

14.5.3 Impacts of the Proposed Project

Impact N-1: Would the Project generate 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? (Class II)

Construction

There are two types of short-term noise impacts associated with construction, noise generated from equipment and increase in traffic flow on local streets.

Equipment Noise

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g. land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods surrounding the construction site. The nearest sensitive receptors to the project construction area are existing residential uses to the north, with the nearest residential building located approximately 30 feet from the construction area. However, it is acknowledged that construction activities would occur throughout the project site and would not be concentrated at a single point near sensitive receptors.

Construction activities would include site preparation, grading, paving, building construction, and architectural coating applications. Such activities would require dozers and tractors during site preparation; excavators, graders, dozers, scrapers, and tractors during grading; cranes, forklifts, generators, pavers, paving equipment, rollers, tractors, and welders during building construction; pavers, air compressors, paving equipment, and rollers during paving; and air compressors during architectural coating applications. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Typical noise levels associated with individual construction equipment are listed in **Table 14-6: Typical Construction Equipment Noise Levels**.

Table 14-6: Typical Construction Equipment Noise Levels

Equipment Onsite	Typical Level (dBA) 50 Feet from the Source
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pump	77
Roller	85
Saw	76
Scraper	85
Shovel	82
Truck	84

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018

The FHWA Roadway Construction Noise Model (RCNM) was used to calculate the worst-case construction noise levels at nearby sensitive receptors surrounding the project site during construction. The modeled receptor locations represent the closest existing receiving land uses to project construction activities. Noise levels at other sensitive receptors surrounding the project site would be located further away and would experience lower construction noise levels than the closest receptors modeled.

The Municipal Code does not establish quantitative exterior construction noise standards and therefore, this analysis conservatively uses the FTA's threshold of 80 dBA (8-hour L_{eq}) for residential uses and 90 dBA (8-hour L_{eq}) for non-residential uses to evaluate construction noise impacts.¹³

The noise levels calculated in **Table 14-7: Project Construction Noise Levels** show estimated exterior noise levels for the worst-case construction noise scenario without accounting for attenuation from intervening barriers, structures, or topography. Because site preparation, grading, and infrastructure activities are anticipated to overlap, the equipment from these phases have been combined. Further, the equipment from the building construction and paving phases have been combined, as these phases are also anticipated to overlap. During construction, equipment would operate throughout the project site and the associated noise levels would not occur at a fixed location for extended periods of time.

Table 14-7: Project Construction Noise Levels

Construction Phase/Activity	Receptor Location			Estimated Exterior Construction Noise Level (dBA L_{eq})	Noise Threshold (dBA L_{eq}) ²	Exceeded?
	Land Use	Direction	Distance ¹			
Site Preparation / Grading / Infrastructure	Residential	North	500	71.6	80	No
	Commercial	East	500	71.6	90	No
Building Construction / Paving	Residential	North	500	71.5	80	No
	Commercial	East	500	71.5	90	No

Notes:

- Following FTA methodology, all equipment is assumed to operate at the center of the project site because equipment would operate throughout the project site and not at a fixed location for extended periods of time. Thus, the worst-case distance used in the RCNM model was 500 feet to the residential property line north of the construction zone and 500 feet to the commercial property line east of the construction zone.
- The FTA Noise and Vibration Manual establishes construction noise standards of 80 dBA $L_{eq}(8\text{-hour})$ for residential uses and 90 dBA $L_{eq}(8\text{-hour})$ for commercial and industrial uses.

Source: Federal Highway Administration, *Roadway Construction Noise Model*, 2006. Refer to **Appendix F** for noise modeling results.

¹³ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 7-2, Page 179, September 2018.

As shown in [Table 14-7](#), construction noise levels would range from approximately 71.5 to 71.6 dBA L_{eq} at the nearest residential and commercial receptors, which would not exceed the FTA's construction noise standards of 80 dBA L_{eq} and/or 90 dBA L_{eq} . Notwithstanding, the project would be required to implement [MM N-1.1: Construction Noise Reduction](#) to reduce construction noise levels. [MM N-1.1](#) would require construction best management practices and limit noise-generating construction activities to occur between the daytime hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday and non-City holidays. Implementation of the construction noise best management practices would ensure that construction noise would not result in annoyance or disturbance or injury or endangerment of the health, repose, peace or safety of any reasonable person of normal sensitivity residing in the project vicinity. With implementation of [MM N-1.1](#), impacts would be reduced to a less than significant level.

Construction Traffic Noise

Construction activities would cause increased noise along access routes to and from the project site due to movement of equipment and workers, as well as hauling trips. Grading at the project site would require approximately 93,600 cubic yards of import, which would result in approximately 11,700 hauling trips.¹⁴ It is anticipated that construction worker trips would be a maximum of 951 trips per day, and vendor trips would be a maximum of 285 trips per day.¹⁵ As a result, mobile source noise would increase along access routes to and from the project site during construction. However, mobile traffic noise from construction trips would be temporary and would cease upon completion of project construction.

According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, a doubling of traffic volumes would result in a 3 dB increase in traffic noise levels, which is barely detectable by the human ear. As shown in [Table 14-4: Existing Traffic Noise Levels](#), all roadway segments in the project vicinity have greater than 2,039 average daily trips (ADT). Project construction trips would result in a maximum of 1,236 trips per day during the building construction phase. Therefore, project-generated construction trips (i.e., 1,236 trips per day) would not double existing traffic volumes (i.e. 2,039 ADT). It should be noted that this analysis conservatively assumes that every single project-generated construction trip would travel along one roadway segment. However, in reality, the project's construction trips would be distributed along the surrounding local roadways. Thus, the project-generated construction trips would not have the potential to significantly increase traffic noise volumes in the project vicinity and impacts would be less than significant. Additionally, the combination of on-site construction equipment and construction traffic noise would not exceed the FTA threshold.

¹⁴ Ibid.

¹⁵ Ibid.

14.5.4 Operations

Implementation of the project would create new sources of noise in the project vicinity. The major noise sources associated with the project that would potentially impact existing and future nearby residences include the following:

- Traffic noise;
- Mechanical equipment (i.e., trash compactors, air conditioners, etc.);
- Slow moving delivery/supply trucks on the project site, approaching and leaving the loading areas;
- Activities at the loading areas (i.e., maneuvering and idling trucks, banging and clanging of equipment); and
- Parking areas (i.e., car door slamming, car radios, engine start-up, and car pass-by).

Traffic Noise

The proposed project would result in additional traffic on adjacent roadways from daily activities, thereby increasing vehicular noise in the vicinity of existing and proposed land uses. Based on the transportation analysis, typical daily activities are forecast to generate 10,983 average daily trips. In general, traffic noise level increases of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable (Caltrans, 2013). Generally, traffic volumes on project area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA. Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant.

Traffic noise levels for roadways primarily affected by the project were calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108). Traffic noise modeling was conducted for conditions with and without the project, based on traffic volumes obtained from the transportation analysis. The calculated traffic noise levels for the "Near Term Without Project" and "Near Term With Project" scenarios are compared in **Table 14-8: Near Term and Near Term Plus Project Traffic Noise Levels**. As described in **Table 14-8**, under the "Near Term Without Project" scenario, noise levels would range from approximately 52.7 dBA to 70.7 dBA, with the highest noise levels occurring along the Dublin Boulevard segment from Tassajara Road to Brannigan Street. The "Near Term With Project" scenario noise levels would range from approximately 53.7 dBA to 70.8 dBA, with the highest noise levels also occurring along the Dublin Boulevard segment from Tassajara Road to Brannigan Street.

Table 14-8: Near Term and Near Term Plus Project Traffic Noise Levels

Roadway	Near Term Without Project Noise Level (dBA CNEL)	Near Term With Project Noise Level (dBA CNEL)	Change	Significant Impact
Hacienda Drive				
Central Parkway to Dublin Boulevard	62.5	62.5	0.0	No
Dublin Boulevard to I-580 WB Off Ramp	67.1	67.2	0.1	No
I-580 WB Off Ramp to I-580 EB Off Ramp	67.1	67.2	0.1	No
I-580 EB Off Ramp to Owens Drive	69.0	69.1	0.1	No
Tassajara Road				
Fallon Road to Gleason Drive	68.0	68.0	0.0	No
Gleason Drive to Aviano Way	67.6	67.7	0.1	No
Aviano Way to Project Driveway	67.6	67.7	0.1	No
Project Driveway to Central Parkway	67.6	67.7	0.1	No
Central Parkway to Project Driveway (South Entry Level Townhomes)	68.1	68.3	0.2	No
Project Driveway (South Entry Level Townhomes) to Finnian Way	68.2	68.3	0.1	No
Finnian Way to Project Driveway (Affordable Housing)	68.2	68.6	0.4	No
Project Driveway (Affordable Housing) to Dublin Boulevard	68.2	68.6	0.4	No
Dublin Boulevard to Northside Drive	69.9	70.2	0.3	No
Northside Drive to I-580 WB Off-Ramp	69.9	70.2	0.3	No
I-580 WB Off-Ramp to Pimlico Drive	70.5	70.7	0.2	No
Saint Rita Road				
I-580 WB Off-Ramp to Pimlico Drive	69.2	69.4	0.2	No
Brannigan Street				
Gleason Drive to Aviano Way	54.4	54.6	0.2	No
Aviano Way to Central Parkway	54.9	55.4	0.5	No

Roadway	Near Term Without Project Noise Level (dBA CNEL)	Near Term With Project Noise Level (dBA CNEL)	Change	Significant Impact
Central Parkway to Finnian Way	52.7	53.7	1.0	No
Finnian Way to Project Driveway (South Family Homes)	54.0	55.2	1.2	No
Project Driveway (South Family Homes) to Dublin Boulevard	54.0	55.6	1.6	No
Dublin Boulevard to Project Driveway (Commercial)	51.6	54.4	2.8	No
Fallon Road				
Tassajara Road to Gleason Drive	64.2	64.2	0.0	No
Gleason Drive to Central Parkway	66.5	66.5	0.0	No
Central Parkway to Dublin Boulevard	68.1	68.1	0.0	No
Dublin Boulevard to I-580 WB Off Ramp	68.6	68.7	0.1	No
I-580 WB Off Ramp to I-580 EB Off Ramp	67.6	67.7	0.1	No
I-580 EB Off Ramp to W Jack London Boulevard	66.5	66.6	0.1	No
Gleason Drive				
Tassajara Road to Project Driveway	62.0	62.1	0.1	No
Project Driveway to Brannigan Street	62.0	62.1	0.1	No
Brannigan Street to Grafton Street	61.0	61.1	0.1	No
Grafton Street to Fallon Road	60.7	60.7	0.0	No
Central Parkway				
Hacienda Drive to Tassajara Road	60.7	60.9	0.2	No
Tassajara Road to Project Driveway (North Side)	61.8	62.0	0.2	No
Project Driveway (North Side) to Brannigan Street	61.8	61.9	0.1	No
Brannigan Street to Montalcino Street/Chancery Lane	61.6	61.7	0.1	No

Roadway	Near Term Without Project Noise Level (dBA CNEL)	Near Term With Project Noise Level (dBA CNEL)	Change	Significant Impact
Montalcino Street/Chancery Lane to Grafton Street	62.0	62.1	0.1	No
Grafton Street to Fallon Road	62.2	62.3	0.1	No
Dublin Boulevard				
Hacienda Drive to Tassajara Road	70.6	70.7	0.1	No
Tassajara Road to Project Driveway (South Family Homes)	70.7	70.8	0.1	No
Project Driveway (South Family Homes) to Brannigan Street	70.7	70.8	0.1	No
Brannigan Street to Grafton Street	70.5	70.6	0.1	No
Grafton Street to Keegan Street	70.5	70.5	0.0	No
Keegan Street to Lockhart Street	69.9	69.9	0.0	No
Lockhart Street to Fallon Road	70.0	70.0	0.0	No
East of Fallon Road	68.3	68.3	0.0	No

Source: Noise modeling is based on traffic data within the transportation analysis for the SCS Dublin Project, prepared by Kimley-Horn, 2022.

As depicted in **Table 14-8: Near Term and Near Term Plus Project Traffic Noise Levels**, the “Near Term With Project” traffic noise levels would not exceed the 3.0 dBA increase significance threshold along any of the surrounding roadways. As a result, the project would not result in a perceptible increase in traffic noise levels and impacts would be less than significant.

On-Site Mobile Noise

Future residents at the project site would be exposed to mobile traffic noise along Tassajara Road, Dublin Boulevard, Central Parkway, Brannigan Street, and Gleason Drive. **Table 14-8: Near Term and Near Term Plus Project Traffic Noise Levels** identifies traffic noise levels at 100 feet from the roadway centerline. As shown in **Table 14-8**, the “Near Term With Project” traffic noise levels along adjacent roadways (i.e. Tassajara Road, Dublin Boulevard, Central Parkway, and Gleason Drive) would range from 61.9 to 70.8 dBA CNEL. Therefore, future on-site residences facing adjacent roadways would experience traffic noise levels above the City’s 60 dBA Normally Acceptable exterior standard for residential uses and the City’s 45 dBA interior standard per the State Building Code and Implementing Policy 9.2.1.B.6.

As such, the project would be required to comply with **MM N-1.2: Noise Attenuation**, which requires a detailed acoustical study demonstrating that all residential units would meet the City's 60 dBA exterior noise standard for all common outdoor living areas through any necessary noise reduction features (barriers, berms, enclosures, etc.). Further, **MM N-1.2** also requires all residential units to be designed to ensure that interior noise levels in habitable rooms from exterior sources (including vehicles on adjacent roadways) not exceed 45 dBA, in compliance with Title 24 of the California Code of Regulations and Implementing Policy 9.2.1.B.6. Compliance with **MM N-1.2** would ensure on-site mobile noise impacts would be less than significant.

Mechanical Equipment

Regarding mechanical equipment, the project would generate stationary-source noise associated with heating, ventilation, and air conditioning (HVAC) units. Such HVAC units typically generate noise levels of approximately 52 dBA at a reference distance of 50 feet¹⁶ from the operating units during maximum heating or air conditioning operations, which would attenuate to 46 dBA at 100 feet. The nearest existing sensitive receptors would be located more than 100 feet from the commercial and mixed-use areas of the project site. The proposed PA-4 single family residential areas would be located adjacent to existing residences (north of Gleason Drive). However, the mechanical equipment associated with the proposed residences would be similar to the existing uses and would also be buffered by an existing wall, a proposed road and existing and proposed setbacks and would be approximately 100 feet away from the closest residences. Given that existing sensitive receptors would be located beyond 100 feet from on-site HVAC units, noise generated by HVAC units would not result in a significant impact.

Slow Moving Trucks (Deliveries) and Loading Areas

Potential noise impacts with the project's commercial uses would be associated primarily with truck deliveries. The primary noise associated with truck deliveries is the arrival and departure of trucks. Noise sources at truck loading areas may include maneuvering and idling trucks, truck refrigeration units, forklifts, banging and clanging of equipment (i.e., hand carts and roll-up doors), and voices of truck drivers and employees. The closest sensitive receptors would be located 400 feet or more away from proposed commercial loading areas and in most cases, would not have a direct line of sight to the loading areas.

Delivery truck loading/unloading activities typically result in maximum noise levels from 68 dBA at 30 feet.¹⁷ These activities are expected to occur intermittently throughout the day, as trucks arrive and leave the parking lot areas for deliveries. Delivery truck noise at the existing sensitive receptors would be attenuated to 45.5 dBA and would not exceed the City's Normally

¹⁶ Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

¹⁷ Loading dock reference noise level measurements conducted by Kimley-Horn on December 18, 2018.

Acceptable standard of 60 dBA. Therefore, truck delivery noise impacts would be less than significant.

Parking Areas

The instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys range from 53 to 61 dBA.¹⁸ Conversations in parking areas may also be an annoyance to adjacent sensitive receptors. Sound levels of speech typically range from 33 dBA at 50 feet for normal speech to 50 dBA at 50 feet for very loud speech.¹⁹ These activities are expected to occur intermittently throughout the day, as residents, visitors, and employees arrive and leave the parking areas. As such, noise associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. While the instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys may be an annoyance, noise levels are not a significant impact.

The nearest sensitive receptors would be the residences located approximately 120 feet to the east of potential non-residential parking areas within the project site. At this distance, noise levels would attenuate to 53.4 dBA. As parking lot noise levels would not exceed the City's 60 dBA standard, project-related parking lot noise impacts would be less than significant.

Operations Conclusion

Overall, with implementation of **MM N-1.2: Noise Attenuation** and adherence to Municipal Code requirements, noise impacts associated with traffic, mechanical equipment, deliveries, loading/unloading activities, and parking lot noise would be reduced to a less than significant level.

Mitigation for Impact N-1

MM N-1.1 Construction Noise Reduction

To reduce the effects of construction noise, the City of Dublin shall ensure that the project applicants include the following on all construction contracts for the project:

- All construction operations shall comply with local noise standards and be limited to normal daylight hours. All stationary equipment shall be adequately muffled and located away from sensitive receptors. The construction contractor shall limit all on-site noise-producing construction activities, including deliveries and warming up of equipment, to the daytime hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday, and non-City holidays.

¹⁸ Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.

¹⁹ Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden. Noise Navigator Sound Level Database with Over 1700 Measurement Values, July 6, 2010.

- The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment.
- The construction contractor shall locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- The construction contractor shall prohibit unnecessary idling of internal combustion engines.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem, as deemed acceptable by the City of Dublin Community Development Department. The construction contractor shall conspicuously post the contact name and telephone number for the noise disturbance coordinator at the construction site.

MM N-1.2 Noise Attenuation

As part of the Site Development Review Permit process for Planning Areas 2, 3, and 4, a detailed acoustical study based on architectural plans shall be prepared by a qualified acoustical consultant and submitted to the City of Dublin Community Development Department to demonstrate that all residential units would meet the City's 60 dBA exterior noise standard for all common outdoor living areas. In addition, the acoustical study shall demonstrate that interior noise levels at all residential units at the project site would meet the City's 45 dBA threshold. This mitigation measure complies with the applicable sections of the California Building Code (Title 24 of the *California Code of Regulations*) and Implementing Policy 9.2.1.B.6. The necessary noise reduction may be achieved by implementing noise control measures at the receiver locations. Where closed windows are required to achieve the interior 45 dBA CNEL limit, project plans and specifications shall include ventilation as required by the California Building Code. The final grading and building plans shall incorporate the required noise barriers (patio enclosure, wall, berm, or combination wall/berm), and the property owner/developer shall install these barriers and enclosures.

Impact N-2: Would the Project generate excessive groundborne vibration or groundborne noise levels? (Class III)**14.5.5 Construction**

Increases in groundborne vibration levels attributable to the project would be primarily associated with construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, depending on the building category of the nearest buildings adjacent to the potential pile driving area, the potential construction vibration damage criteria vary. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.50 inch per second (inch/sec) peak particle velocity (PPV) is considered safe and would not result in any construction vibration damage.

The FTA architectural damage criterion for continuous vibrations for non-engineered timber and masonry buildings (i.e., 0.20 inch/second) appears to be conservative. The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver.

In addition, not all buildings respond similarly to vibration generated by construction equipment. The City of Dublin does not provide numerical vibration standards for construction activities. Therefore, this impact discussion uses FTA standard of 0.20 inch/second PPV with respect to the prevention of structural damage for normal buildings and human annoyance.

Construction of the project could potentially include impact-pile driving or drilling. The nearest structures to project construction activities, with the exception of pile driving, would be the residential buildings located approximately 30 feet to the north. Additionally, pile driving activities may occur during construction of the multi-family parking garage. As such, the nearest structures (residential buildings) may be located as close as 100 feet east of potential pile driving activities. **Table 14-9: Typical Construction Equipment Vibration Levels**, identifies vibration levels feet for typical construction equipment.

Based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction would range from 0.003 to 0.644 inch/second PPV at 25 feet from the source of activity. It is also acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest structure.

At the closest structures and sensitive receptors are located approximately 30 feet away, vibration from typical equipment for construction activities (i.e., excluding pile drivers) would range from 0.002 to 0.068 inch/second PPV. At 100 feet (i.e., the closest distance for structures and sensitive receptors to pile driving activities) vibration generated from pile driving would range from 0.021 to 0.081 inch/second PPV. Therefore, vibration from construction activities experienced at the nearest structure and sensitive receptor would not exceed the 0.20 inch/second PPV significance threshold.

Table 14-9: Typical Construction Equipment Vibration Levels

Equipment Type	Reference Peak Particle Velocity at 25 Feet (inches per second)	Peak Particle Velocity at 30 Feet (inches per second) ²	Peak Particle Velocity at 100 Feet (inches per second) ²
Pile Driver (impact) ¹	0.644	--	0.081
Pile Driver (sonic) ¹	0.170	--	0.021
Large Bulldozer	0.089	0.068	0.011
Caisson Drilling	0.089	0.068	0.011
Loaded Trucks	0.076	0.058	0.010
Rock Breaker	0.059	0.045	0.007
Jackhammer	0.035	0.027	0.004
Small Bulldozer/Tractor	0.003	0.002	<0.001

Notes: -- = not applicable

1. Pile driving activities would not occur within 100 feet of existing structures.

2. Calculated using the following formula:

$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where:

PPV (equip) = the peak particle velocity in inch per second of the equipment adjusted for the distance

PPV (ref) = the reference vibration level in inch per second from Table 7-4 of the FTA Transit Noise and Vibration Impact Assessment Manual (September 2018)

D = the distance from the equipment to the receiver

As noted above, the 0.20 inch/second PPV threshold is conservative because the construction vibration damage criteria for non-engineered timber and masonry buildings. Buildings would be better represented by the 0.50 inch/second PPV significance threshold (construction vibration damage criteria for reinforced concrete, steel or timber buildings). Because construction equipment vibration levels would not exceed the significance thresholds, impacts would be less than significant.

14.5.6 Operations

The project would not generate groundborne vibration that could be felt at surrounding uses. Project operations would not involve railroads or substantial heavy truck operations, and therefore would not result in vibration impacts at surrounding uses. As a result, impacts from vibration associated with project operation would be less than significant.

Impact N-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, would the Project expose people residing or working in the Project area to excessive noise levels? (Class III)

The nearest public airport is the Livermore Municipal Airport located approximately 2.5 miles southeast of the project site. The ALUCP shows the project within the Airport Influence Area, Airport Safety Zone 7 as shown in **Figure 11-1: Livermore Municipal Airport Safety Compatibility Zones**. According to the ALUC, no restrictions on residential development shall apply to portions of Zone 7 that extend beyond the boundary of the Airport Protection Area. Although, the project is partially within the Airport Influence Area, it is not within the airport protection Area and is outside of the 55 CNEL noise contour. There are no private airstrips near the project site. Impacts would be less than significant in this regard.

14.5.7 Cumulative Impacts

The geographic area for the analysis of cumulative impacts to noise is the City of Dublin.

Impact N-4: Contribute to cumulatively considerable impacts on noise? (Class II)

Cumulative Construction Noise

The project's construction activities would result in a substantial temporary increase in ambient noise levels. There would be periodic, temporary, significant noise impacts that would cease upon completion of construction activities. The project would contribute to construction noise impacts if other developments proximate to the project site occur concurrent with the project.

However, based on the noise analysis above, the project's construction noise impacts would be less than significant with implementation of **MM N-1.1: Construction Noise Reduction**. Based on the fact that noise dissipates as it travels away from its source, noise impacts from on-site construction activities would be limited to the project site and vicinity. Thus, cumulative

operational noise impacts from related projects, in conjunction with project-specific noise impacts, would not be cumulatively significant.

Cumulative Operational Noise

Cumulative noise impacts describe how much noise levels are projected to increase over existing conditions with the development of the project and other foreseeable projects. Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to buildout of the project and other projects in the vicinity. Cumulative increases in traffic noise levels were estimated by comparing the Cumulative Without Project and Cumulative With Project scenarios to existing conditions. The transportation analysis considers cumulative traffic from future growth assumed in the traffic model, as well as cumulative projects identified by the City of Dublin.

A project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level (i.e., auditory level increase) threshold. The following criteria is used to evaluate the combined effect of the cumulative noise increase.

- *Combined Effect.* The cumulative with project noise level ("Cumulative With Project") would cause a significant cumulative impact if a 3.0 dB increase over "Existing" conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to the project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the project.

The following criteria have been used to evaluate the incremental effect of the cumulative noise increase.

- *Incremental Effects.* The "Cumulative With Project" causes a 1.0 dBA increase in noise over the "Cumulative Without Project" noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded. Noise by definition is a localized phenomenon, and reduces as distance from the source increases. Consequently, only the project and growth due to occur in the general area would contribute to cumulative noise impacts. **Table 14-10: Cumulative Plus Project Conditions Predicted Traffic Noise Levels** identifies the traffic noise effects along roadway segments in the vicinity of the project site for "Existing," "Cumulative Without Project," and "Cumulative With Project," conditions, including incremental and net cumulative impacts.

First, it must be determined whether the "Cumulative With Project" 3.0 dB increase above existing conditions (*Combined Effects*) is exceeded. Next, under the *Incremental Effects* criteria, cumulative noise impacts are defined by determining if the forecast ambient ("Cumulative

Without Project”) noise level is increased by 1 dB or more. As shown in Table 14-10, the proposed project would exceed the combined effects criterion of 3.0 dB along the following roadways: Brannigan Street, Central Parkway, and Dublin Boulevard. However, the incremental effects criterion of 1 dB would not be exceeded along any of the roadway segments in the project vicinity.

As indicated in Table 14-10, the cumulative increase in traffic noise levels, as a result of the proposed project and cumulative projects, would not exceed the combined and incremental effects criteria along any of the surrounding roadways. Therefore, the project, in combination with cumulative background traffic noise levels, would result in a less than significant cumulative impact. The project’s contribution to traffic noise would not be cumulatively considerable.

Table 14-10: Cumulative Plus Project Conditions Predicted Traffic Noise Levels

Roadway Segment	Existing	Cumulative Without Project	Cumulative With Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	dBA @ 100 Ft from Centerline	dBA @ 100 Ft from Centerline	dBA @ 100 Ft from Centerline	dBA Difference: Existing and Cumulative With Project	dBA Difference: Cumulative Without and With Project	
Hacienda Drive						
Central Parkway to Dublin Boulevard	62.3	63.7	63.6	1.3	-0.1	No
Dublin Boulevard to I-580 WB Off Ramp	66.4	67.7	67.7	1.3	0.0	No
I-580 WB Off Ramp to I-580 EB Off Ramp	66.6	67.3	67.3	0.7	0.0	No
I-580 EB Off Ramp to Owens Drive	68.9	69.3	69.3	0.4	0.0	No
Tassajara Road						
Fallon Road to Gleason Drive	67.3	68.5	68.4	1.1	-0.1	No
Gleason Drive to Aviano Way	67.0	67.4	67.4	0.4	0.0	No
Aviano Way to Project Driveway	67.0	67.4	67.4	0.4	0.0	No
Project Driveway to Central Parkway	67.0	67.4	67.4	0.4	0.0	No
Central Parkway to Project Driveway (South Entry Level Townhomes)	67.8	67.7	67.5	-0.3	-0.2	No
Project Driveway (South Entry Level Townhomes) to Finnian Way	67.9	67.7	67.6	-0.3	-0.1	No
Finnian Way to Project Driveway (Affordable Housing)	67.9	68.0	67.8	-0.1	-0.2	No

Roadway Segment	Existing	Cumulative Without Project	Cumulative With Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	dBA @ 100 Ft from Centerline	dBA @ 100 Ft from Centerline	dBA @ 100 Ft from Centerline	dBA Difference: Existing and Cumulative With Project	dBA Difference: Cumulative Without and With Project	
Project Driveway (Affordable Housing) to Dublin Boulevard	67.9	68.0	67.9	0.0	-0.1	No
Dublin Boulevard to Northside Drive	69.2	70.1	70.2	1.0	0.1	No
Northside Drive to I-580 WB Off-Ramp	69.2	70.6	70.5	1.3	-0.1	No
I-580 WB Off-Ramp to Pimlico Drive	70.1	71.0	70.9	0.8	-0.1	No
Saint Rita Road						
I-580 WB Off-Ramp to Pimlico Drive	69.0	69.1	69.1	0.1	0.0	No
Brannigan Street						
Gleason Drive to Aviano Way	53.4	54.8	54.7	1.3	-0.1	No
Aviano Way to Central Parkway	54.0	56.1	55.5	1.5	-0.6	No
Central Parkway to Finnian Way	51.8	54.3	54.4	2.6	0.1	No
Finnian Way to Project Driveway (South Family Homes)	53.3	55.2	55.7	2.4	0.5	No
Project Driveway (South Family Homes) to Dublin Boulevard	53.3	55.2	55.8	2.5	0.6	No
Dublin Boulevard to Project Driveway (Commercial)	51.4	55.4	54.7	3.3	-0.7	No

Roadway Segment	Existing	Cumulative Without Project	Cumulative With Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	dBA @ 100 Ft from Centerline	dBA @ 100 Ft from Centerline	dBA @ 100 Ft from Centerline	dBA Difference: Existing and Cumulative With Project	dBA Difference: Cumulative Without and With Project	
Fallon Road						
Tassajara Road to Gleason Drive	63.6	64.9	64.9	1.3	0.0	No
Gleason Drive to Central Parkway	65.5	66.9	66.9	1.4	0.0	No
Central Parkway to Dublin Boulevard	67.4	68.1	68.1	0.7	0.0	No
Dublin Boulevard to I-580 WB Off Ramp	67.9	69.4	69.4	1.5	0.0	No
I-580 WB Off Ramp to I-580 EB Off Ramp	67.1	69.0	69.0	1.9	0.0	No
I-580 EB Off Ramp to W Jack London Boulevard	65.9	68.1	68.1	2.2	0.0	No
Gleason Drive						
Tassajara Road to Project Driveway	61.7	63.7	63.6	1.9	-0.1	No
Project Driveway to Brannigan Street	61.7	63.7	63.6	1.9	-0.1	No
Brannigan Street to Grafton Street	60.6	62.5	62.5	1.9	0.0	No
Grafton Street to Fallon Road	60.5	61.6	61.5	1.0	-0.1	No
Central Parkway						
Hacienda Drive to Tassajara Road	59.2	63.1	63.0	3.8	-0.1	No
Tassajara Road to Project Driveway (North Side)	60.3	63.0	62.9	2.6	-0.1	No

Roadway Segment	Existing	Cumulative Without Project	Cumulative With Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	dBA @ 100 Ft from Centerline	dBA @ 100 Ft from Centerline	dBA @ 100 Ft from Centerline	dBA Difference: Existing and Cumulative With Project	dBA Difference: Cumulative Without and With Project	
Project Driveway (North Side) to Brannigan Street	60.3	63.1	62.8	2.5	-0.3	No
Brannigan Street to Montalcino Street/Chancery Lane	59.7	62.6	62.5	2.8	-0.1	No
Montalcino Street/Chancery Lane to Grafton Street	59.3	62.9	62.8	3.5	-0.1	No
Grafton Street to Fallon Road	58.9	63.1	63.0	4.1	-0.1	No
Dublin Boulevard						
Hacienda Drive to Tassajara Road	68.0	70.5	70.5	2.5	0.0	No
Tassajara Road to Project Driveway)	67.3	71.0	71.0	3.7	0.0	No
Project Driveway (South Family Homes) to Brannigan Street	67.3	71.0	71.0	3.7	0.0	No
Brannigan Street to Grafton Street	66.9	70.9	70.8	3.9	-0.1	No
Grafton Street to Keegan Street	66.5	70.7	70.7	4.2	0.0	No
Keegan Street to Lockhart Street	64.9	70.2	70.1	5.2	-0.1	No
Lockhart Street to Fallon Road	65.2	70.4	70.4	5.2	0.0	No
East of Fallon Road ¹	0.0	69.8	69.8	69.8	0.0	No

Notes:

1. The Dublin Boulevard extension, east of Fallon Road, will be constructed as part of the proposed project.

Source: Noise modeling is based on traffic data within the transportation analysis for the SCS Dublin Project, prepared by Kimley-Horn, 2022.

14.5.8 Level of Significance after Mitigation

Table 14-11: Summary of Impacts and Mitigation Measures – Noise summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to noise.

Table 14-11: Summary of Impacts and Mitigation Measures – Noise

Impact	Impact Significance	Mitigation
Impact N-1: Would the Project generate 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? (Class II)	Less than Significant with Mitigation	MM N-1.1: Construction Noise Reduction MM N-1.2: Noise Attenuation
Impact N-2: Would the Project generate excessive groundborne vibration or groundborne noise levels? (Class III)	Less than significant	None required.
Impact N-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, would the Project expose people residing or working in the Project area to excessive noise levels? (Class III)	Less than significant	None required.
Impact N-4: Contribute to cumulatively considerable impacts on noise? (Class II)	Less than Significant with Mitigation	MM N-1.1: Construction Noise Reduction MM N-1.2: Noise Attenuation

14.6 References

California Department of Transportation (Caltrans). 2009. Technical Noise Supplement. pp. 248 – 249. Available at: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf. Accessed April 4, 2022.

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FHWA (Federal Highway Administration). 2006. FHWA Highway Construction Noise Handbook. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02). Available at: https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/index.cfm. Accessed April 4, 2022.

FICON (Federal Interagency Committee on Noise). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August. Available at: http://www.gsweventcenter.com/GSW_RTC_References/1992_0801_FICON.pdf. Accessed April 4, 2022.

FTA (Federal Transit Administration). 2006. Transit Noise and Vibration Impact Assessment Final Report. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed April 4, 2022.

FTA. Transit Noise and Vibration Impact Assessment Manual. 2018, Table 7-2, Page 179.

USEPA (United States Environmental Protection Agency). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Available at: <https://nepis.epa.gov/Exe/ZyNET.exe/2000L3LN.TXT?ZyActionD=ZyDocument&Client=EPA&Index=Prior+to+1976&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C70thru75%5CTxt%5C00000001%5C2000L3LN.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL>. Accessed April 4, 2022.



Source: Google Earth, 2021

Figure 14-1: Noise Measurement Locations

SCS Dublin Project
Environmental Impact Report



Not to scale

Kimley»Horn
Expect More. Experience Better.

15 Population & Housing

15.1 Introduction

This section describes effects on population and housing that would be caused by implementation of the project. Information used to prepare this section came from the following resources:

- City of Dublin, *General Plan*, 1985 amended 2022
- City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022
- City of Dublin, *6th Cycle Public Review Draft Housing Element*, 2022
- Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), *Plan Bay Area 2050*, 2021

15.2 Scoping Issues Addressed

During the public comment scoping period for the project, comments requesting analysis of the number of school children generated were received.

15.3 Environmental Setting

This section presents information on population and housing conditions in the project area.

15.3.1 Population Characteristics

Alameda County

Alameda County has a current population of approximately 1,656,591 persons (DOF, 2021a). The 6th Cycle Public Review Draft Housing Element estimates that the population of Alameda County will increase to 2,092,370 (an increase of 42 percent compared to population in 2010) by 2040 (City of Dublin, 2022a). **Table 15-1: City of Dublin and Alameda County Existing and Forecasted Population** shows population numbers for the County as determined by the City as determined by the City General Plan Housing Element.

City of Dublin

As of January 1, 2021, the City of Dublin has a population of 64,695 persons representing approximately four percent of Alameda County's population (DOF, 2021a). As shown in **Table 15-1: City of Dublin and Alameda County Existing and Forecasted Population**, the population in Dublin is expected to increase to 83,595 by 2040 (a 82 percent increase compared to population in 2010).

Table 15-1: City of Dublin and Alameda County Existing and Forecasted Population

	2010	2020	2025	2030	2035	2040	Percent Increase 2010-2040
Dublin	46,036	72,589	54,780	71,870	78,140	83,595	82%
Alameda County	1,477,980	1,682,353	1,776,495	1,868,635	1,960,630	2,092,370	42%

Sources: City of Dublin 6th Cycle Draft Housing Element, 2022.

15.3.2 Housing Characteristics

Alameda County

As shown in [Table 15-2: Housing Units for City of Dublin and Alameda County](#), the County has an estimated 617,415 housing units with an average of 2.84 persons per household (DOF, 2021c and City of Dublin, 2022a).

As reported by the Housing Element, the vacancy rate is a measure of the availability of housing in a community. It also demonstrates how well the types of units available meet the market demand. A low vacancy rate suggests that households may have difficulty finding housing within their price range; a high supply of vacant units may indicate either the existence of a high number of desired units, or an oversupply of units. The vacancy rate for housing in Alameda County is estimated to be 5.4 percent (City of Dublin, 2022a).

Table 15-2: Housing Units for City of Dublin and Alameda County

	2021	Persons per Household	Vacancy Rate
Dublin	23,891	2.99	2.9 %
Alameda County	617,415	2.84	5.4 %

Source: DOF, 2021c and City of Dublin, 2022a.

City of Dublin

According to the Department of Finance, the City of Dublin has approximately 23,891 housing units with an average of 2.99 persons per household in 2021. The vacancy rate for housing in the City is 2.9 percent.

The Association of Bay Area Governments (ABAG) determines the regional housing needs allocation (RHNA) by income category for each community in the region based on employment activities, community patterns, types and tenure of housing needs, and others every eight years. The City of Dublin's allocation and approved units for the 5th RHNA cycle and the City's allocation for the 6th RHNA cycle that will begin on January 1, 2023 are shown in [Table 15-3: City of Dublin Regional Housing Needs Allocation](#). The City is required to ensure that sufficient

sites that are planned and zoned for housing are available to accommodate its need and to implement proactive programs that facilitate and encourage the production of housing commensurate with its housing needs.

Table 15-3: City of Dublin Regional Housing Needs Allocation

Income Category	5 th Cycle RHNA	Units Approved	Remaining 5 th Cycle RHNA	6 th Cycle RHNA
Extremely Low Income	796	26	770	1,085
Very Low Income				
Low Income	446	39	407	625
Moderate Income	425	79	346	560
Above Moderate Income	618	4,878	-4,260	1,449
Total	2,285	5,022	-2,737	3,719

Sources: City of Dublin, 2022, ABAG, 2021

15.4 Applicable Regulations, Plans, and Standards

15.4.1 Federal

There are no applicable federal regulations applicable to the project.

15.4.2 State

California Housing Element Law

Government Code Sections 65580–65589.8 include provisions related to the requirements for housing elements of local government general plans. Among these requirements, some of the necessary elements include an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. Additionally, to assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goals, the statute calls for local jurisdictions to plan for, and allow the construction of, a share of the region's projected housing needs. The share is known as the Regional Housing Needs Allocation (RHNA). The RHNA for the Bay Area is based on a Regional Housing Needs Plan (RHNP) developed by ABAG for a nine-county area that includes Alameda County and the City of Dublin. The City's RHNA that covers the period from 2015 through 2023 includes 2,285 units and the City's RHNA that covers the period from 2023-2031 includes 3,719 units.

15.4.3 Local

Association of Bay Area Governments

Association of Bay Area Governments (ABAG) is the official comprehensive regional planning agency for the San Francisco Bay Area, which is composed of nine counties, including Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. ABAG

produces growth forecasts on four-year cycles so that other regional agencies, including the Metropolitan Transportation Commission (MTC) and the Bay Area Air Quality Management District (BAAQMD), can use the forecast to make funding and regulatory decisions. ABAG projections are also the basis for the Regional Transportation Plan and regional Ozone Attainment Plan. The general plans, zoning regulations, and growth management programs of local jurisdictions inform the ABAG projections. The ABAG projections are also developed to reflect the impact of “smart growth” policies and incentives that could be used to shift development patterns from historical trends toward a better jobs-housing balance, increased preservation of open space, and greater development and redevelopment in urban core and transit-accessible areas throughout the ABAG region.

In October 2021, ABAG and MTC adopted Plan Bay Area 2050 and its associated Environmental Impact Report (EIR). The third such regional housing and transportation plan adopted by MTC and ABAG, Plan Bay Area 2050 is a long-range blueprint to guide transportation investments and land-use decisions through 2050, while meeting the requirements of California’s landmark 2008 Senate Bill 375, which calls on each of the state’s 18 metropolitan areas to develop a Sustainable Communities Strategy to accommodate future population growth and reduce greenhouse gas emissions from cars and light trucks.

City of Dublin General Plan 6th Cycle Public Review Draft Housing Element

The City of Dublin is in the process of updating and adopting its Housing Element. Dublin’s 6th Cycle Draft Housing Element, which focuses on the regional housing needs for the period between 2023 and 2031, includes all the mandatory sections as identified by California law, including an inventory of land parcels that could accommodate its Regional Housing Needs Allocation (RHNA) as set by ABAG. The Housing Element outlines housing production objectives, describes strategies to achieve those objectives, examines the local need for special needs populations, identifies adequate sites for housing production serving various income levels, analyzes constraints to new development, and evaluates the Housing Element’s consistency with other General Plan elements. A list of Housing Element policies and programs that are relevant to the project are provided below.

Policy A.1: Ensure the provision of a variety of housing types to fulfill the City’s RHNA.

Policy D.3: Encourage the provision of housing to meet the needs of households of all sizes.

Program B.1 Mixed-Use Development

Program B.6: Housing Type and Size Variations

The Affordable Housing Program

The City of Dublin has Inclusionary Zoning Regulations that require residential development to include a certain percentage of affordable housing. Developers may choose to satisfy a portion of the obligation through the payment of a fee in-lieu of construction, with the funds being deposited into the City’s affordable housing fund. As of May 2, 2022, the fund had an available

balance of \$6.1 million. The City also adopted a nonresidential development affordable housing impact fee to fund affordable housing to serve the workforces of new nonresidential development. The proceeds are deposited into the affordable housing fund program.

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan (EDSP) and EIR were adopted in May 1993 to evaluate the potential environmental effects of urbanizing eastern Dublin over a 20 to 30-year period. The buildout potential of the EDSP is 32,023 residents, 13,913 dwelling units, and 29,424 jobs. The project is located in the EDSP area.

15.5 Environmental Impacts and Mitigation Measures

15.5.1 Significance Criteria

The following significance criteria for population & housing were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address Lead Agency requirements and the full range of potential impacts related to this project.

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria.

- Induce substantial 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.)
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

15.5.2 Summary of No and/or Beneficial Impacts

Displace existing housing or substantial people.

The project site does not include any existing housing and therefore would not displace existing housing or people. Implementation of the project would not displace substantial people, nor would it require the construction of replacement housing elsewhere. As a result, no impacts would occur.

15.5.3 Impacts of the Proposed Project

Impact POP-1: Induce substantial population growth in an area, either directly or indirectly (Class III).

According to the latest population numbers from the City, the average Dublin household has 2.99 persons per unit (City of Dublin, 2022a). Therefore, the proposed Project is estimated to add a maximum population of approximately 1,944 residents. As shown in **Table 15-4: Additional Population Generated by Project**, this increase would constitute a three percent increase as compared to the City's 2021 population. A three percent increase would still be within the range of population growth forecast by the City, which is 83,595 by 2040. Therefore, the project's population growth would be consistent with the City's population projections.

Table 15-4: Additional Population Generated by Project

Dublin 2021 Population	Population generated by Project ¹	Percent of Total Population
64,695	1,944	3%

Source: DOF, 2021c, City of Dublin, 2022a.

Note:

1- Based on 2.99 people per unit from City of Dublin, 2022a.

Table 15-5: Buildout Potential of the Eastern Dublin Specific Plan, shows the forecasted growth of the EDSP area and the project site within the EDSP area. The project would provide 265,000 square feet of general commercial land use. This comprises 2.5 percent of the planned general commercial for the EDSP area and 30 percent of the planned commercial area for the project site. Three percent of the anticipated commercial growth for the area would not result in a direct population increase beyond what is anticipated. The project would comprise four percent of the forecasted residential units for the EDSP but increase the number of residential units planned for the project site by 1,095 units (an increase of 155%). While the project would increase the population projections for the City, by increasing the number of units allowed from 261 to 650, the project still represents a small fraction of the planned buildout for the EDSP overall; would be consistent with the nature of surrounding development; and would be within the estimate of population growth estimated by and the City's Housing Element. For all of these reasons, impacts associated with increased population growth would be less than significant and no mitigation measures are required.

Table 15-5: Buildout Potential of the Eastern Dublin Specific Plan

	EDSP	EDSP Project Site	Proposed Project	% of EDSP overall	% of EDSP Project site
Residential (units)	17,970	261	650	4%	249%
Commercial (square feet)	10,575,000	902,563	265,000	2.5%	30%
Population	42,669	705	1,800	4%	255%

Source: Eastern Dublin Specific Plan, 1994, as updated.

15.5.4 Cumulative Impact Analysis

The geographic context for the analysis of cumulative population and housing impacts includes the City of Dublin.

Impact POP-2: Contribute to cumulatively considerable impacts on population and housing (Class III).

The project would have a maximum of 1,944 residents. **Table 15-1: City of Dublin and Alameda County Existing and Forecasted Population** estimates the City of Dublin would have a population of 83,595 by 2040, and the project population growth is within City population forecasts. Therefore, the project would not cause a cumulatively considerable impact on population and housing and no mitigation is required.

15.5.5 Level of Significance after Mitigation

Table 15-6: Summary of Impacts and Mitigation Measures – Population & Housing summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to population & housing.

Table 15-6: Summary of Impacts and Mitigation Measures – Population & Housing

Impact	Impact Significance	Mitigation
Impact POP-1: Induce substantial population growth in an area, either directly or indirectly (Class III).	Less than significant	None required.
Impact POP-2: Contribute to cumulatively considerable impacts on population and housing (Class III).	Less than significant	None required.

15.6 References

- ABAG (Association of Bay Area Governments). 2021. Final regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031. Available at https://abag.ca.gov/sites/default/files/documents/2021-12/Final_RHNA_Allocation_Report_2023-2031-approved_0.pdf. Accessed April 5, 2022.
- City of Dublin. 2023-2031 Draft Housing Element. 2022a Available at <https://www.dublin.ca.gov/2241/Housing-Element-Update#:~:text=The%20Housing%20Element%20is%20one,process%20as%20further%20described%20below>. Accessed May 12, 2022.
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16 Public Services, Utilities & Service Systems

16.1 Introduction

This section describes effects on public services, utilities, and service systems that would be caused by implementation of the project. The discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project construction and operation. In addition, existing laws and regulations relevant to public services, utilities, and service systems are described. In some cases, compliance with these existing laws and regulations would serve to reduce or avoid certain impacts that might otherwise occur with the implementation of the project.

Information used to prepare this section came from the following resources:

- Project application and related materials
- City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022
- City of Dublin, *General Plan*, 1985 amended 2022
- City of Dublin, *Parks and Recreation Master Plan*, 2022
- Dublin Police Services, *2020-2021 Annual Report*, 2021
- Dublin San Ramon Services District, *SCS Dublin Development Project Water Supply Assessment and Water Supply Verification*, 2022 (see [Appendix G](#))
- Dublin San Ramon Services District, *Wastewater Treatment and Biosolids Facilities Master Plan*, 2017
- Dublin San Ramon Services District, *Water System Master Plan*, 2016
- Dublin San Ramon Services District, *2020 Urban Water Management Plan*, 2021
- Dublin Unified School District, *2020/2021 Demographics and Alternative Enrollment Projections*, May 2021
- Dublin Unified School District, *School Facilities Needs Analysis*, May 2021
- Dublin Unified School District, *7-Year Student Population Projections Packet by Residence Fall 2019-2025*, March 2019
- Zone 7 Water Agency, *2020 Urban Water Management Plan*, 2021

16.2 Scoping Issues Addressed

During the public comment scoping period for the project, comments requesting analysis of the project impact on schools, potable water supply, wastewater connection, and stormwater management were received.

16.3 Environmental Setting

This section presents information on public services, utilities, and service systems in the project area. Physical impacts to public services, utilities, and service systems are usually associated with population in-migration and growth in an area, which increase the demand for a particular service, leading to the need for expanded or new facilities.

16.3.1 Public Services

Police Protection

The Alameda County Sheriff's Office provides law enforcement to the City of Dublin on a contract basis (known locally as "Dublin Police Services"). Criminal investigations, crime prevention, and some business office functions are performed at the Dublin Civic Center (100 Civic Center), while dispatch and some data processing functions are handled at Sheriff's Office facilities in Oakland and San Leandro. Dublin Police Services has 59 sworn personnel assigned to duty in the City of Dublin. Eight City of Dublin civilian employees provide support services for Dublin Police Services (Dublin Police Services, 2021). Dublin Police Services responded to 30,706 calls for service in 2020 with an average patrol response time of approximately 5.3 minutes (Dublin Police Services, 2021). This response time meets the Alameda County Sheriff's Office standards and the industry average of five minutes.

Fire Protection and Emergency Response Services

The Alameda County Fire Department ("Fire Department") provides fire protection, emergency medical services, and public assistance to the City of Dublin. The Fire Department serves approximately 508 square miles and has a service population of 394,000 people in their entire service area (Alameda County Fire Department, 2022a). The Fire Department employs over 400 personnel and 100 reserve firefighters who staff four battalions consisting of 35 companies in 27 fire stations. Fire Department services also include three specialized response teams: Hazardous Materials Unit, Urban Search and Rescue Unit, and Water Rescue Team Unit. The Fire Department also staffs specialized response teams for hazardous materials, urban search and rescue, and water rescue.

As shown in **Table 16-1: Alameda County Fire Department Stations in the City of Dublin**, the Fire Department has three stations and one fire bureau in the City of Dublin, all are staffed. Stations 16 and 18 are staffed with one engine company and three personnel. Station 17, closest to the project site, houses an engine and a truck company, one Type 3 engine, and a water rescue boat. The station is staffed by a total of six personnel.

Table 16-1: Alameda County Fire Department Stations in the City of Dublin

Station Number	Address	Distance to Project	Station Details
16	7494 Donohue Drive	3.4 miles	This station has one engine company, a patrol, a water tender, and an air support unit. The response area is primarily west and central Dublin.
17	6200 Madigan Avenue	0.6 miles	This station houses an engine and a truck company, one Type 3 engine, and a water rescue boat. Central Dublin is its primary response area but also responds to the west, central core, and eastern most sections of the City.
18	4800 Fallon Road	0.8 miles	This station has an engine company, one patrol, and a bulldozer. Its response area covers the easternmost portions of Dublin, urban wildland interface areas, and Highway 580.
Fire Prevention Bureau	100 Civic Plaza	2.5 miles	Performs plan reviews and inspections of new construction. The Bureau reviews building plans to ensure compliance with applicable fire codes and regulations.

Source: Alameda County Fire Department, 2022b.

In 2020-2021, the Fire Department responded to 3,698 calls from the City of Dublin. The Fire Department's average response times are reported to the City of Dublin on a quarterly basis. For fiscal year 2020-2021 the Fire Department responded to 92% of all emergency calls in less than 5 minutes.

Aid Agreements

The Fire Department has mutual and automatic mutual aid agreements with the Livermore-Pleasanton Fire Department, the San Ramon Valley Fire Department, and the Camp Parks Fire Department. These agreements help to ensure service is sent based on shortest response times and may result in a mix of different agencies responding to a particular call. In the case of a wildland fire within the State Responsibility Areas of the County, CAL FIRE's ground and air resources are also available. The Fire Department also participates in the California Master Mutual Aid Plan that allows source requests to be filled from an agency outside Alameda County.

Schools

Dublin Unified School District (DUSD) provides Transitional Kindergarten (TK) through grade 12 educational services to the City of Dublin. During the 2020-2021 school year, DUSD had a total enrollment of 12,604 students, 689 certified staff members, 359 classified staff, and 65 administrators (DUSD, 2021a and DUSD, 2022a). DUSD operates 12 schools; seven elementary (TK-5), one TK-8 school, two middle (grade 6-8), and two high schools (one comprehensive, one alternative) (DUSD, 2022a). Emerald High is also under construction and Phase I is anticipated

to open in 2024, giving the district three total high school sites (DUSD, 2022b). DUSD also offers Pathways, an alternative option for elementary students; Independent Study; Dublin Adult School; Home/Hospital Instruction for those with serious physical or mental health issues; Home Schooling for K-6th grade; Online Program for Students; and various programs for students with disabilities.

As noted in the *DUSD2021 School Facilities Needs Analysis*, in order to be consistent with the State Allocation Board (SAB) reporting requirements, the enrollment school level configuration was adjusted to represent grades transitional kindergarten through 6 at the elementary level and grades 7 and 8 at the middle school level. Available facilities capacity is calculated by subtracting the October 2020 student enrollment from existing school facilities capacity for each school level. As a result and as shown in **Table 16-2: Dublin School District Existing Student Capacity**, this operation results in deficit capacity at the Elementary School and High School levels and available capacity at the Middle School level.

Table 16-2: Dublin School District Existing Student Capacity

Grade Level	Existing Facilities Capacity	Student Enrollment (October 2020)	Available/ (Deficit) Capacity
Elementary School (TK-6)	6,994	7,483	(489)
Middle School (7-8)	1,909	1,906	3
High School (9-12)	2,499	3,381	(882)
Total	11,402	12,770	(1,368)

Source: DUSD, 2021b.

Elementary Schools

DUSD comprises eight elementary schools (including Cottonwood Creek Elementary (TK-8)) serving 7,483 TK-5 students as of Fall 2020. The project site is served by Kolb Elementary School (0.5 miles east) and Cottonwood Creek Elementary (1.5 miles west).

Middle School

DUSD comprises three middle schools (including Cottonwood Creek Elementary (TK-8)) serving 1,906 grade 6-8 students as of Fall 2020. The project site is served by Fallon Middle School (0.5 miles northeast) and Cottonwood Creek Elementary (1.5 miles west).

High School

The DUSD currently operates one comprehensive high school, Dublin High School, located four miles west of the project site. As of Fall 2017, there were 3,381 grade 9-12 high school

students enrolled in the District with Dublin High School serving 3,286 students, and Valley Continuation High serving the remaining students.

Parks

The City of Dublin's Parks and Recreation Master Plan establishes the goals, standards, policies, and action programs to guide the City of Dublin in the acquisition, development and management (operations and maintenance) of Dublin's park and recreation facilities through the ultimate build-out of the City in accordance with the General Plan.

As shown in **Table 16-3: Dublin Parks and Sport Facilities Existing Service Levels and Standards**, the Master Plan establishes park standards for neighborhood and community parks and sport facilities. Comparisons to the National Recreation and Park Association (NRPA) standards are also shown for reference.

Table 16-3: Dublin Parks and Sport Facilities Existing Service Levels and Standards

Park & Sport Facilities	Current Supply (Number of Facilities)	NRPA Standard	City of Dublin Standard	Existing Level of Service ^{1,2}
Parks	24	8.5 per 1,000	5 per 1,000	3.27
Baseball/Softball Fields	18	1 per 7,500	1 per 9,350	8.32
Soccer Fields	16	1 per 19,000	1 per 3,500	12.18
Tennis Courts	20	1 per 5,500	1 per 2,700	6.80
Basketball Courts	13	1 per 8,570	1 per 4,300	4.53
Cricket Fields	2	--	1 per 40,000	0.19 ³
Volleyball Courts	9	1 per 19,800	1 per 17,000	5.33

Notes:

1. Acres per 1,000 population
2. Based on current population
3. Based on 2015 population

Source: City of Dublin Parks and Recreation Master Plan, 2022.

The City currently provides 24 parks, which include 18 neighborhood parks/square, five community parks, and one nature park totaling a combined 237.04 acres. These parks range from passive to active and are a mix of small neighborhood parks to a large aquatic complex. In addition to these facilities, Dublin maintains over 26.26 miles of greenways and trails. The series of trails sprawls throughout the City ranging from recreational trails to shared use paths. The City of Dublin envisions 116.84 additional acres of parks in the future. One potential future site for a two-acre Neighborhood Square is near the project site south of Dublin Boulevard between Tassajara Road and Fallon Road.

The nearest community park is Emerald Glen Park located directly adjacent to the project site on the west side of Tassajara Road. The closest neighborhood parks are Bray Commons (0.4 miles east) and Ted Fairfield Park (0.5 miles north).

Community Facilities

As shown in **Table 16-4: City of Dublin Community Facilities**, the Parks and Community Services Department operates five community centers.

Table 16-4: City of Dublin Community Facilities

Name	Address	Distance from Project Site	Facilities
Dublin Civic Center	100 Civic Plaza	2.5 miles	Council Chambers: Theater-style seating for 142, panel seating for 11, two podiums, and two built-in screens. Regional Meeting Room: 80 for dining and 125 for assembly.
Dublin Public Library Community Room	200 Civic Plaza	2.55 miles	1,830 square foot Community Room that is available for rent for up to 122 people.
Dublin Senior Center	7600 Amador Valley Boulevard	3.3 miles	Ballroom seats 248 for dining, raised stage, casual seating nook, and two patios Lounge area with fireplace and furniture
Shannon Community Center	11600 Shannon Avenue	3.8 miles	6,000 square foot room that fits 300 for dining
Heritage Park and Museums	6600 Donlon Way	3.7 miles	The Old St. Raymond Church and Sunday School Barn are available for rentals

Source: Dublin Parks & Community Services, 2022.

16.3.2 Utilities and Service Systems

Water

Dublin San Ramon Services District (DSRSD) provides potable water and non-potable recycled water service to the City of Dublin and the Dougherty Valley portion of the City of San Ramon. As of 2020, DSRSD's water service population is approximately 92,409 (DSRSD, 2021).

Potable Water

DSRSD obtains its water supply from Alameda County Flood Control and Water Conservation District, Zone 7 ("Zone 7"), a multi-purpose agency that oversees water-related issues in the Livermore-Amador Valley. Zone 7 is a State Water Project contractor that wholesales treated water to four retail water agencies in the Tri-Valley area (DSRSD, City of Livermore, City of

Pleasanton, and California Water Service Company-Livermore District). It also retails non-potable water supplies for irrigated agricultural use, treated water to several direct customers, provides and maintains flood control facilities, and manages groundwater and surface water supplies in its service area. In addition to other water sources listed below, DSRSD has a groundwater pumping quota (GPQ) of 645 acre-feet/year in the Livermore Valley Main Groundwater Basin (Main Basin), which Zone 7 pumps on DSRSD's behalf as part of its water contract.

Zone 7 uses a combination of water supplies and water storage facilities to meet the municipal and industrial demands of its retailers. These include the following:

- Imported surface water from the State Water Project;
- Imported surface water transferred from the Byron Bethany Irrigation District;
- Local surface water runoff captured in Del Valle Reservoir;
- Local groundwater extracted from the Livermore Valley Groundwater Main Basin;
- Local storage in the Chain-of-Lakes; and
- Non-local groundwater storage in the Semitropic Water Storage District and Cawelo Water District.

A full discussion of these water supply sources can be found in the Zone 7's 2020 Urban Water Management Plan (2021).

Recycled Water

DSRSD's water supply is augmented with recycled water from its Recycled Water Treatment Facilities. DSRSD owns and operates a wastewater treatment plant that treats wastewater from Dublin, South San Ramon, and Pleasanton. The wastewater treatment plant includes conventional secondary treatment facilities, as well as tertiary and advanced recycled water treatment facilities. The DSRSD - East Bay Municipal Utility Recycled Water Authority (DERWA) operates the San Ramon Valley Recycled Water Program, a multi-phased project that distributes recycled water from the Recycled Water Treatment Facilities to portions of DSRSD's and East Bay Municipal Utility District (EBMUD) service areas.

DSRSD began its recycled water program in the early 1990's by adopting Resolution No. 42-92 in August 1992. The resolution set priorities and policies for the use and promotion of recycled water service within and outside DSRSD's water service area. DSRSD then adopted the "Water Recycling Business Plan Framework" in 1993, to establish the DSRSD Recycled Water Enterprise. Since that time, recycled water has been an important part of water planning at DSRSD.

In that same year, the City of Dublin certified an EIR for the Eastern Dublin General Plan Amendment and Specific Plan. The DSRSD service plan for eastern Dublin is predicated upon the use of recycled water for landscape irrigation. Potable water supply requests to Zone 7 by

DSRSD for Eastern Dublin under the "Contract between Zone 7 and DSRSD for a Municipal & Industrial Water Supply," are the net of the eastern Dublin total water demands, less the recycled water provided by DSRSD.

In 1995, DSRSD began providing recycled water to Dougherty Valley. Similar to eastern Dublin, the DSRSD service plan for Dougherty Valley is also predicated upon the use of recycled water for landscape irrigation. In 2018, DSRSD commenced delivery of recycled water to Pleasanton. DSRSD currently has a moratorium on any new recycled water connections.

Current and Projected Water Supply and Demand

Table 16-5: DSRSD Current and Projected Water Supply and Demand, provides a summary of DSRSD's current and projected future water supply and demand as presented in the 2020 UWMP.

Table 16-5: DSRSD Current and Projected Water Supply and Demand

	2020 Actual	2025	2030	2035	2040	2045
Demand						
Potable Water	10,330	11,993	13,363	13,807	13,820	14,034
Recycled Water	3,044	3,044	3,004	3,044	3,044	3,044
Total Demand	13,374	15,037	16,407	16,851	16,864	17,078
Supply						
Potable Water	10,966	11,993	13,363	13,807	13,820	14,034
Recycled Water	2,888	3,044	3,044	3,044	3,044	3,044
Total Supply	13,854	15,037	16,407	16,851	16,864	17,078

Notes: All values are in acre feet per year

Source: DSRSD, 2021.

Project Site Facilities

A series of water lines ranging from 12 inches (along Brannigan Street) to as large as 20 inches (along Dublin Boulevard) surround the project site.

Wastewater

DSRSD provides wastewater collection and treatment service to the City of Dublin as well as to the southern portion of the City of San Ramon and Pleasanton making its wastewater service area larger than its water service area.

Collection System

DSRSD's wastewater infrastructure includes a wastewater collection system and the wastewater treatment plant (WWTP). The collection system conveys wastewater primarily by

gravity to the WWTP. Generally, wastewater flows by gravity from the northwest to the south and from the east to the west and then to the south within the wastewater collection service area. The collection system consists of approximately 207 miles of gravity mains, 26 feet of force main, one permanent lift station, and one temporary lift station (DSRSD, 2017).

The project would connect to existing underground DSRSD sewer lines located within the right-of-way of the adjacent roadways. Major sanitary sewer facilities include a 30-inch pipe on Dublin Boulevard, a 15-inch pipe on Tassajara Road, and 10-inch pipes on both Brannigan Street and Gleason Drive.

Treatment Facility

DSRSD owns and operates the Regional Wastewater Treatment Plant in the City of Pleasanton, which treats wastewater from the cities of Dublin, South San Ramon, and Pleasanton. The WWTP includes conventional secondary treatment facilities, as well as tertiary and advanced recycled water treatment facilities.

The WWTP includes conventional secondary treatment facilities, as well as tertiary and advanced recycled water treatment facilities. The conventional secondary wastewater treatment facilities include primary sedimentation, activated sludge secondary treatment, secondary sedimentation, chlorine disinfection, and effluent pumping. The secondary treatment facilities currently have an average dry weather flow (ADWF) capacity of 17.0 MGD.

A portion of the secondary effluent from the WWTP is treated further to produce Title 22 disinfected tertiary recycled water ("recycled water"). Recycled water is produced using sand filtration and ultraviolet disinfection facilities (SFUV) during the dry season when demands are high. The sand filtration tertiary treatment facility capacity is approved by RWQCB for 16.2 MGD, and the ultraviolet disinfection system has been approved to be operated at up to 17.6 MGD. The WWTP also includes microfiltration and ultraviolet disinfection facilities (MFUV) with a treatment capacity of 3.0 MGD. These facilities currently act as backup facilities for the SFUV facilities and are used during times of low and high demand.

Wastewater that is not recycled is discharged into the San Francisco Bay through a pipeline owned by the Livermore Amador Valley Water Management Agency (LAVWMA), a joint powers agency created in 1974 by DSRSD, Livermore, and Pleasanton. Operations began in September 1979, with an expansion in 2005, for a current design capacity of 41.2 MGD. The wastewater effluent from the Livermore and DSRSD wastewater treatment facilities are conveyed to the LAVWMA pump station in Pleasanton. The wastewater effluent is then pumped out of the Livermore-Amador Valley via a 16-mile pipeline from Pleasanton to San Leandro and enters the East Bay Regional Discharge Authority system for de-chlorination and discharge through a deep-water outfall to the San Francisco Bay (DSRSD, 2021).

Storm Drainage

The City of Dublin maintains storm drain pipes and inlets that are on public streets or that carry water which originates on a public street. Drainage facilities that are located on private

property are maintained by private property owners. Private drainage facilities may include (but are not limited to) V-ditches or channels on residential or commercial property and drain inlets in parking lots.

Runoff that leaves the project site enters either a 42-inch-diameter line in Arnold Road or an 84-inch-diameter line into a storm drainage structure on the north side of I-580. From there, runoff is conveyed south under I-580 via a triple set of 54-inch-diameter storm drains to Chabot Canal. Chabot Canal conveys stormwater to Arroyo Mocho, which outlets into South San Ramon Creek, which becomes Arroyo de La Laguna, and ultimately Alameda Creek, which is tributary to San Francisco Bay.

Solid Waste

The City of Dublin has an existing franchise agreement with Amador Valley Industries for residential and commercial garbage, recycling, and organics collection. Single family residences are provided with recycling and organics service with their garbage subscription and must be subscribed to all three streams. Multi-family residences must have access to recycling, organics, and garbage services. Commercial businesses must subscribe to recycling and organics service the same way they subscribe to garbage collection. Solid waste generated within the City is received at Altamont Landfill & Resource Recovery facility which has a total permitted capacity of 124 million cubic yards. The Altamont Landfill has approximately 65.4 million cubic yards of capacity remaining and is permitted to operate through 2070 (CalRecycle, 2022a).

Electricity

Electricity in City of Dublin is provided by East Bay Community Energy (EBCE) and is conveyed to customers through Pacific Gas and Electric's (PG&E) existing infrastructure. In January 2022, standard residential accounts moved from an automatic default service "Bright Choice" which is 80 percent carbon free to EBCE's product "Renewable 100" which is sourced from California wind and solar facilities. Non-residential customers will default to Renewable 100 beginning in October 2022.

Natural Gas

PG&E operates one of the largest natural gas distribution networks in the country, including 48,700 miles of natural gas transmission and distribution pipelines (PG&E, 2022c). Service is provided to 15 million accounts. A transmission gas pipeline runs parallel to the southern boundary of the City, south of Interstate 580, and small-diameter pipelines serve the City (PG&E, 2022c).

16.4 Applicable Regulations, Plans, and Standards

16.4.1 Federal

Wastewater

Clean Water Act

The Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the U. S. under the CWA, the United States Environmental Protection Agency (U.S. EPA) implements pollution control programs and sets wastewater treatment standards.

National Pollutant Discharge Elimination System

Pursuant to Section 402 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act, municipal stormwater discharges in the City of Dublin are regulated under the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R2-2009-0074, NPDES Permit No. CAS612008, adopted October 14, 2009, and revised November 28, 2011. The Municipal Regional Permit is overseen by the Regional Water Board.

The City of Dublin is a member agency of the Alameda Countywide Clean Water Program, which assists municipalities and other agencies in Alameda County with implementation of the Municipal Regional Permit. Provision C.3 addresses post-construction stormwater management requirements for new development and redevelopment projects that add and/or replace 10,000 square feet or more of impervious area. Provision C.3 requires the incorporation of site design, source control, and stormwater treatment measures into development projects to minimize the discharge of pollutants in stormwater runoff and non-stormwater discharges and to prevent increases in runoff flows. Low Impact Development (LID) methods are to be the primary mechanism for implementing such controls.

Municipal Regional Permit Provision C.3.g pertains to hydromodification management. This Municipal Regional Permit provision requires that stormwater discharges not cause an increase in the erosion potential of the receiving stream over the existing condition. Increases in runoff flow and volume must be managed so that the post-project runoff does not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force. The Hydromodification Management Susceptibility Map, developed by the Alameda Countywide Clean Water Program, indicates that the Community Plan area drains primarily to earthen channels and therefore projects implemented under the Community Plan that create and/or replace one acre or more of impervious surface and increase impervious surface over pre-project conditions are subject to hydromodification management requirements.

16.4.2 State

Police Services

All law enforcement agencies within California are organized and operate in accordance with the applicable provisions of the California Penal Code. This code sets forth the authority, rules of conduct, and training for police officers.

Fire Protection

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the 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 hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all fire-fighting and emergency medical equipment.

Fire Protection

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Fire hazards are addressed mainly through the application of the State Fire Code that addresses access, including roads, and vegetation removal in high fire hazard areas, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, and many other general and specialized fire safety requirements for new and existing buildings and premises.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Emergency Response

The State passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

Schools

Senate Bill 50

Senate Bill (SB) 50 (1998), which is funded by Proposition 1A, limits the power of cities and counties to require mitigation of developers as a condition of approving new development and provides instead authorizes school districts to impose fees in amounts limited by law. SB 50 anticipated that the state would fund a portion of new school facilities construction and the remainder would be funded by the local school district. SB 50 provides for three levels of statutory impact fees. The level depends on whether state funding is available; whether the school district is eligible for state funding; and whether the school district meets certain additional criteria involving bonding capacity, year-round schools, and the percentage of moveable classrooms in use. Consistent with this authority, the DUSD as of June 14, 2022 implements a Level 2 fee of \$7.96 per square foot of new residential development and \$0.78 per square foot of new commercial development.

California Government Code sections 65995-65998 sets forth provisions to implement SB 50 and limits the City's discretion to mitigate for development's impact on schools. Specifically, in accordance with Section 65995(h), the payment of statutory fees is "deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization...on the provision of adequate school facilities." The school district, rather than the City, is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Furthermore, Government Code section 65995(i) provides that: "A state or local agency may not deny or refuse to approve a legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073 on the basis of a person's refusal to provide school facilities mitigation that exceeds the amounts authorized pursuant to this section or pursuant to Section 65995.5 or 65995.7, as applicable."

California Education Code Section 17620(a)(1) states that the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities.

California Government Code, Section 65995(b), and Education Code Section 17620

SB 50 amended California Government Code Section 65995, which contains limitations on Education Code Section 17620, the statute that authorizes school districts to assess development fees within school district boundaries. Government Code Section 65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. On February 23, 2022, the State Allocation Board (SAB) approved increasing the allowable amount of statutory school facilities fees (Level I School Fees) from \$4.08 to \$4.79 per square foot of assessable space for residential

development of 500 square feet or more, and from \$0.66 to \$0.78 per square foot of chargeable covered and enclosed space for commercial/industrial development (SAB, 2022). School districts may levy high fees if they apply to the SAB and meet certain conditions.

The Kindergarten-University Public Education Facilities Bond Act of 2002 (Proposition 47)

This act was approved by California voters in November 2002 and provides for a bond issue of \$13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted at areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California to provide adequate higher education facilities to accommodate growing student enrollment.

Parks and Recreation

Quimby Act

The Quimby Act (California Government Code Section 66477) states that “the legislative body of a City or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map.” Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City of Dublin has adopted park fees as allowed by the Quimby Act, as described in greater detail below.

Water Supply

Senate Bill 610

SB 610 amended the Public Resources and Water Codes as they pertain to consultation with water supply agencies and water supply assessments. SB 610 requires Water Supply Assessments (WSA) for “projects” as that term is defined by Water Code Section 10912, which are subject to CEQA. The project does meet the definition of a project as specified in Water Code Section 10912 and has not been the subject of a previously adopted WSA or included in a WSA for a larger project; thus, a WSA is required and included as **Appendix G**.

Senate Bill 221

Whereas SB 610 requires a written assessment of water supply availability, SB 221 requires lead agencies to obtain an affirmative written verification of sufficient water supply prior to approval of certain specified subdivision projects. For this purpose, water suppliers may rely on an Urban Water Management Plan (if the project is accounted for within the UWMP), a Water

Supply Assessment prepared for the project, or other acceptable information that constitutes “substantial evidence.”

“Sufficient water supply” is defined in SB 221 as the total water supplies available during normal, single-dry and multiple-dry water years within the 20-year (or greater) projection period that are available to meet the projected demand associated with a project, in addition to existing and planned future uses. The project would develop more than 500 dwelling units and is therefore subject to the requirements of SB 221. The WSA provides verification of sufficient water supply to serve the project.

California Urban Water Management Planning Act

The California Urban Water Management Planning (UWMP) Act requires urban water suppliers to prepare an UWMP every five years and to file this plan with the Department of Water Resources, the California State Library, and any city or county within which the supplier provides water supplies. All urban water suppliers, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet annually are required to prepare an UWMP (CWC §10617).

The UWMP Act was enacted in 1983. Over the years, it has been amended in response to water resource challenges and planning imperatives confronting California. A significant amendment was made in 2009 as a result of the governor’s call for a statewide 20 percent reduction in urban water use by 2020. Colloquially known as 20x2020, the Water Conservation Act of 2009 (also referred to as SB X7-7) required urban retail water suppliers to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. Beginning in 2016, urban retail water suppliers are required to comply with the water conservation requirements in SB X7-7 to be eligible for state water grants or loans.

Wastewater

San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay RWQCB is the local division of the SWRCB that has oversight authority over the project. SWRCB is a State department that provides a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in California. NPDES permits allow RWQCB to collect information on where the waste is disposed, what type of waste is being disposed, and what entity is disposing of the waste. RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

Solid Waste

California Integrated Waste Management Act

California’s Integrated Waste Management Act of 1989 (AB 939) requires that cities and counties divert 50 percent of all solid waste from landfills as of January 1, 2000, through source

reduction, recycling, and composting. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity.

To help achieve this goal, the Act requires that each city and county prepare a Source Reduction and Recycling Element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle), a department within the California Natural Resources Agency, which administers programs formerly managed by the State's Integrated Waste Management Board and Division of Recycling.

As part of CalRecycle's Zero Waste Campaign, regulations affect what common household items can be placed in the trash. Household materials—including fluorescent lamps and tubes, batteries, electronic devices and thermostats—that contain mercury are no longer permitted in the trash and must be disposed separately.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 requires adequate space in all developments to be set aside for collecting and loading recyclable materials and organics. The Act requires CalRecycle to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model, or an ordinance of their own, governing adequate areas in development programs for collection and loading of recyclable materials.

CALGreen Building Code

The California Green Building Standards Code (CALGreen) came into effect for all projects beginning after January 1, 2011. Effective January 1, 2017, Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that, in the absence of a more stringent local ordinance, a minimum of 65 percent of non-hazardous construction and demolition debris must be recycled or salvaged. The Code requires the applicant to have a waste management plan for on-site sorting of construction debris.

The City of Dublin has a more stringent requirement and requires that at least 65 percent for remodels and 75 percent for new construction by weight of the total construction and demolition debris generated by a project via reuse or recycling excluding asphalt and concrete debris of which 100 percent must be diverted, unless the applicant has been granted an infeasible exemption. The modified diversion requirement is equal to the maximum feasible

diversion rate established by the WMP Compliance Official for the project (Dublin Municipal Code Chapter 7.30).

16.4.3 Regional

Zone 7 Water Agency

Zone 7 is responsible for providing flood protection to the residents of Eastern Alameda County. Zone 7 owns and maintains drainage facilities within the Dublin city limits. Drainage plans for development projects must be reviewed by Zone 7 to ensure that the project does not propose any impacts to downstream facilities. In addition, development projects that involve work within Zone 7's right-of-way or that involve construction, modification, or connection to a Zone 7 facility are required to obtain an Encroachment Permit and comply with Zone 7 standards and specifications.

Dublin San Ramon Services District

The Dublin San Ramon Services District (DSRSD) provides potable water and recycled water service within its service area. DSRSD's 2020 Urban Water Management Plan UWMP was adopted by the DSRSD Board of Directors in June 2021. The 2020 UWMP includes existing and projected water demands for existing and projected future land uses within DSRSD's service area.

The Water Shortage Contingency Plan (WSCP) describes the DSRSD's strategic plan to prepare and respond to water shortage conditions resulting from a drought, regulatory action, emergency, or other types of events. It also includes defined actions to reduce demand over six shortage condition levels, from 10 percent to more than 50 percent demand reductions. The WSCP provides a guide for DSRSD to prevent catastrophic service disruptions and has been updated to be consistent with the 2018 Water Conservation Legislation requirements.

Alameda County Emergency Operations Plan

The purpose of the Alameda County Emergency Operations Plan (EOP) is to establish policies and procedures and assign responsibilities for effective management of emergency operations within Alameda County.

The County's responses to disasters is based on five phases:

1. Prevention
2. Preparedness
3. Response
4. Recovery
5. Mitigation

During each phase, there are specified activities, operational capabilities and effective responses to a given disaster. The County's Primary Emergency Operating Centers (EOC) is in Dublin at 4985 Broder Blvd approximately one-mile northwest of the project site. The EOC is

equipped with emergency power generators, radios, telephones, maps, and can be staffed 24-hours per day.

16.4.4 Local

City of Dublin General Plan

The City of Dublin General Plan establishes the following policies associated with public services and utilities that are relevant to the project:

Guiding Policy 3.4.2.1: Provide active parks and facilities which are adequate to meet citywide needs for open space, cultural, and sports facilities, as well as the local needs of the Eastern Extended Planning Area.

Guiding Policy 3.4.2.2: Establish a trail system with connections to planned regional and sub-regional systems, including north-south corridors such as East Bay Regional Park District's trail along Tassajara Creek north to Mt. Diablo State Park.

Implementing Policy 3.4.2.B.1: Require land dedication and improvements for the parks designated in the General Plan for the Eastern Extended Planning Area and based on a standard of 5 net acres per 1,000 residents. Collect in-lieu park fees as required by City policies.

Guiding Policy 4.4.1.A.1: Ensure that adequate solid waste disposal capacity is available, to avoid constraining development, consistent with the Dublin General Plan.

Implementing Policy 4.4.1.B.3: Prior to project approval, the applicant shall demonstrate that capacity will exist in solid waste disposal facilities for their project prior to the issuance of building permits.

Implementing Policy 4.4.1.B.4: Large scale projects should be required to submit a plan that demonstrates how they will contribute toward the City's State mandated diversion requirement.

Guiding Policy 4.5.1.A.1: Expand sewage treatment and disposal capacity to avoid constraining development consistent with the Dublin General Plan.

Implementing Policy 4.5.1.B.1: Prior to project approval, developers shall demonstrate that adequate capacity will exist in sewage treatment and disposal facilities for their projects prior to the issuance of building permits.

Guiding Policy 4.6.1.A.1: Base General Plan proposals on the assumption that water supplies will be sufficient and that local wells could be used to supplement imported water if necessary.

Guiding Policy 7.3.1.A.1: Maintain natural hydrologic systems.

Implementing Policy 7.3.1.B.1: Enforce the requirements of the Municipal Regional Permit for stormwater issued by the San Francisco Bay Regional Water Quality Control Board or any subsequent permit as well as Chapter 7 (Public Works) and Chapter 9 (Subdivisions) of the Dublin Municipal Code for maintenance of water quality and protection of stream courses.

Implementing Policy 7.3.1.B.2: Review development proposals to ensure site design that minimizes soil erosion and volume and velocity of surface runoff.

Guiding Policy 12.3.1.A.1: Work with Zone 7 and DSRSD to secure an adequate water supply for, and provide water delivery to, existing and future customers in Dublin.

Implementing Policy 12.3.1.B.1: In anticipation of planned future growth, continue working with DSRSD and Zone 7 to plan and provide for sufficient future water supplies.

Guiding Policy 12.3.2.A.1: Increase water conservation efforts and strive to maximize water use efficiency in existing residential, commercial, and industrial buildings and grounds.

Guiding Policy 12.3.2.A.2: Support DSRSD in extending recycled water service to established areas of Dublin.

Guiding Policy 12.3.3.A.1: Promote the conservation of water resources in new development

Implementing Policy 12.3.3.B.1: Continue implementation of the Water Efficient Landscape Regulations, which requires grouping plants with the same water requirements together (hydrozoning), the installation of water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls, and the minimal use of turf.

Implementing Policy 12.3.3.B.2: Support DSRSD's ongoing efforts to extend recycled water infrastructure ("purple pipe") to new locations.

Guiding Policy 12.3.5.A.1: Protect the quality and quantity of surface water and groundwater resources that serve the community.

Guiding Policy 12.3.5.A.2: Protect water quality by minimizing stormwater runoff and providing adequate stormwater facilities.

Guiding Policy 12.3.5.A.3: To minimize flooding in existing and future development, design stormwater facilities to handle design-year flows based on buildout of the General Plan.

Implementing Policy 12.3.5.B.1: Support Zone 7's efforts to complete planned regional storm drainage improvements.

Implementing Policy 12.3.5.B.2: With the goal of minimizing impervious surface area, encourage design and construction of new streets to have the minimum vehicular travel lane width possible while still meeting circulation, flow, and safety requirements for all modes of transportation.

Implementing Policy 12.3.5.B.3: Discourage additional parking over and above the required minimum parking standards for any land use unless the developer can demonstrate a need for additional parking.

Implementing Policy 12.3.5.B.5: Review design guidelines and standard details to ensure that developers can incorporate clean water runoff requirements into their projects.

Implementing Policy 12.3.5.B.6: Maximize the runoff directed to permeable areas or to stormwater storage by appropriate site design and grading, using appropriate detention and/or retention structures, and orienting runoff toward permeable surfaces designed to manage water flow.

Implementing Policy 12.3.5.B.7: Review development plans to minimize impervious surfaces and generally maximize infiltration of rainwater in soils, where appropriate. Strive to maximize permeable areas to allow more percolation of runoff into the ground through such means as bioretention areas, green strips, planter strips, decomposed granite, porous pavers, swales, and other water-permeable surfaces. Require planter strips between the street and the sidewalk within the community, wherever practical and feasible.

Implementing Policy 12.3.5.B.8: Continue conducting construction site field inspections to ensure proper erosion control and materials/waste management implementation to effectively prohibit non-stormwater discharges.

Eastern Dublin Specific Plan

The City of Dublin's Eastern Dublin Specific Plan establishes the following goals, policies and programs associated with public services, utilities and service systems that are relevant to the project:

GOAL: To ensure that fire protection services in eastern Dublin are consistent with standards maintained in the rest of the city.

Policy 8-5: Time the construction of new facilities to coincide with new service demand in order to avoid periods of reduced service efficiency. The first station will be sited and construction completed prior to completion of initial development in the planning area.

Program 8F: Establish appropriate funding mechanisms (e.g., Mello Roos District, developer financing with reimbursement agreements, etc.) to cover upfront costs of capital improvements (i.e., fire stations and related facilities and equipment).

Program 8H: Based on approval by the City, incorporate applicable Dougherty Regional Fire Authority (DRFA) recommendations on project design relating to access, water pressure, fire safety and prevention into the requirements for development approval. Require that the following DPFA design standards are incorporated where appropriate:

- Use of non-combustible roof materials in all new construction.

- Available capacity of 1,000 GPM at 20 PSI fire flow from project fire hydrants on public water mains. For groupings of one-family and small two-family dwellings not exceeding two stories in height, the fire flow requirements are a minimum of 1,000 GPM. Fire flow requirements for all other buildings will be calculated based on building size, type of construction, and location.
- Automatic fire alarm systems and sprinklers in all non-residential structures for human use.
- Compliance with DRFA and City minimum road widths, maximum street slopes, parking recommendations, and secondary access road requirements.

GOAL: Provide adequate police services to the eastern Dublin planning area to ensure the health, safety and welfare of existing and future residents, workers, and visitors.

Policy 8-4: Provide additional personnel and facilities and revise “beats” as needed in order to establish and maintain City standards for police protection service in eastern Dublin.

Program 8E: Incorporate into the requirements of project approval Police Department recommendations on project design that affects traffic safety and crime prevention.

GOAL: To provide an adequate water system for the Eastern Dublin Specific Plan area.

Policy 9-1: Water Conservation. Require the following as conditions of project approval in eastern Dublin:

- Use of water-conserving devices such as low-flow showerheads, faucets, and toilets.
- Support implementation of the DSRSD Water Use Reduction Plan and implementation of Best Management Practices (BMPs) for water conservation.
- Require all developments to meet the BMPs of the Memorandum of Understanding regarding Urban Water Conservation in California, of which DSRD is a signatory.
- Water efficient irrigation systems within public rights-of-way, median islands, public parks, recreation areas and golf course areas (see Program 9B on Water Reclamation).
- Drought resistant plant palettes within public rights-of-way, median islands, public parks, recreation areas and golf course areas.
- Ensure that highly invasive plant species that could out-compete native species and threaten wildlife habitat are not used in these areas. Species which should be prohibited include, but are not limited to: Acacia, Algerian Ivy, Bamboo, Mattress Vine, Black Locust, Blue Gum Eucalyptus, Castor Bean, Cotoneaster, English Ivy, French Broom, Fountain Grass, Giant Reed, German Ivy, Gorse, Ice Plant, Pampas Grass, Periwinkle, Pyracantha, Scotch Broom, Spanish Broom, Tamarisk, Tree of Heaven, and Tree Tobacco.

- Water efficient irrigation and landscaping systems for residential, commercial, institutional, and industrial areas in accordance with AB325.
- Adoption of a water efficient landscape ordinance by the City of Dublin that will apply to eastern Dublin development.
- Encourage the use of recycled water during construction for compaction and dust control.

Program 9B: Water Reclamation. Require the following as conditions of project approval in eastern Dublin:

- Implementation of DSRSD and Zone 7 findings and recommendations on uses of reclaimed water to augment existing water supplies.
- Construction of a recycled water distribution system in eastern Dublin as well as necessary offsite facilities to support recycled water use. Construction of such a recycled water system will require approval of the use of recycled water for landscape irrigation by DSRSD, Zone 7 and the San Francisco Bay Area Regional Water Quality Control Board.

Program 9E: DSRSD Standards. Require that design and construction of all water and recycled water system facility improvements be in accordance with DSRSD policies, standards and master plans.

Program 9F: Consistency With Resource Management Policies. Require the siting of water system infrastructure to be consistent with the Resource Management Policies of this plan.

Program 9G: Implementation Responsibilities. Require the Developer to obtain proper approvals; refer to attached Table 9.1, Water Service Matrix of Implementation responsibilities.

Program 9H: DSRSD Service. Require a “will-serve” letter from DSRSD prior to grading permit approval.

GOAL: To provide adequate wastewater collection, treatment and disposal for the Eastern Dublin Specific Plan area.

Program 9K: Recycled Water Distribution System. Require development within the project to fund a recycled water distribution system computer model reflecting the proposed Specific Plan land uses and verify the conceptual backbone reclaimed water distribution system presented on Figure 9.3.

Program 9M: Design Level Wastewater Investigation. Require eastern Dublin applicants to prepare (in coordination with DSRSD) a detailed wastewater capacity investigation or supplement the information in the Specific Plan, which reflects the phased development approach matched against the allocation of sewer permits. Such an investigation shall include, at a minimum, a thorough estimate of planned land uses at the site and estimated wastewater

flows to be generated at the site. Base the estimation of the wastewater flows for sewer permits on the DSRSD approved wastewater flow factors.

Program 9N: DSRSD Service. Require a “will-serve” letter from DSRSD prior to grading permit approval.

Program 9O: DSRSD Standards. Coordination with DSRSD Policies, Standards and Master Plans. Require design and construction of all wastewater systems to be in accordance with DSRSD service policies, procedures, design and construction standards and master plans.

Program 9P: Onsite Wastewater Treatment. In conjunction with DSRSD, discourage onsite wastewater treatment systems such as package plants and septic systems in accordance with the policies of the San Francisco Bay Regional Water Quality Control Board.

Program 9Q: Connection to Public Sewers. Require all developments in the Specific Plan be connected to public sewers. Exceptions to this requirement, in particular septic tank systems, will only be allowed upon receipt of written approval from Alameda County Environmental Health Department and DSRSD.

Program 9R: Implementation Responsibilities. Require developers obtain proper approvals; refer to attached Table 9.2, Wastewater Service Matrix of Implementation Responsibilities.

GOAL: To provide adequate storm drainage facilities for the Eastern Dublin Specific Plan area.

Policy 9-7: Require drainage facilities that will minimize any increased potential for erosion or flooding.

GOAL: To reduce the total flow of waste to landfill by promoting waste reduction, source separation, curbside collection, and other recycling alternatives to landfiling.

Policy 8-8: Encourage the separation of recyclable materials from the general waste stream by supporting the development of a recycling collection system and facilities.

Program 8K: Prepare a solid waste management plan for eastern Dublin which includes the following:

- Specific areas designated for the collection of recyclable materials in multifamily and commercial areas, with coordination as needed for pick-up.

GOAL: To provide a full complement of community services and facilities as needed in eastern Dublin.

Policy 8-9: Coordinate with Pacific Gas and Electric and Pacific Bell in planning and scheduling future facilities which will serve eastern Dublin.

Program 8-L: Require project applicants to provide documentation that electric, gas, and telephone service can be provided to all new development.

City of Dublin Municipal Code

The City of Dublin Municipal Code contains all ordinances for the City. The Municipal Code is organized by Title, Chapter, and Section.

The City's Fire Code, which is Section 5.08.020, regulates permit processes, emergency access, hazardous material handling, and fire protection systems, including automatic sprinkler services, fire extinguishers, and fire alarms. The Fire Code contains specialized technical regulations related to fire and life safety in the City.

City of Dublin Parks and Recreation Master Plan

The City of Dublin Parks and Recreation Master Plan was adopted in April 2022 by the City Council. The goal of the plan is to build and maintain parks and facilities that both enhance the positive image of the City and meet the needs of the City into the future. The Plan establishes goals, standards, guiding policies, and action programs to guide the City of Dublin in the acquisition, development, and management (operations and maintenance) of Dublin's park and recreation facilities through the ultimate build-out of the City in accordance with the General Plan.

Local Impact Fees

Pursuant to SB 50 and Government Code Section 65994, Dublin Unified School District charges development fees on a per-square-foot basis for commercial and industrial uses.

Additionally, the City has fire, public facilities, noise mitigation and traffic impact fees.

16.5 Environmental Impacts and Mitigation Measures

16.5.1 Significance Criteria

The following significance criteria for public services, utilities, & service systems were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address Lead Agency requirements and the full range of impacts of the project.

An impact of the project would be considered significant and would require mitigation if it would meet one of the following criteria.

- 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 following public services: Fire protection, Police protection, schools, parks, other public facilities.

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of a new water storm drainage facilities or expansion of existing facilities, the construction of which could cause significant effects.
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.
- 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?
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Comply with federal, state, and local statutes and regulations related to solid waste.
- 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.
- Includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The significance of each impact is identified according to the classifications listed below.

Class I: Significant impact; cannot be mitigated to a level that is less than significant.

Class II: Significant impact; can be mitigated to a level that is less than significant through implementation of recommended mitigation measures.

Class III: Adverse impact but less than significant; no mitigation recommended.

Class IV: Beneficial impact; mitigation is not required.

No Impact.

Public Services

Police and fire service providers were contacted to ascertain the current average response times, estimated response times, and current service levels that would be utilized in this impact

analysis. Impacts to these public services would be considered significant if average response times, service ratios or other performance standards could not be met, such that the construction of new or expanded facilities would be required to maintain said ratios, response times and/or other performance standards. The evaluation of school impacts is limited to those effects with the potential to result in the need for construction of new classrooms or placement of portable classrooms.

Utilities

Utility providers were contacted to ascertain utility services available to the project. Impacts to these utilities would be considered significant if utility service standards could not be met, such that the construction of new or expanded facilities would be required to maintain availability of utilities.

16.5.2 Summary of No and/or Beneficial Impacts

Compliance with Solid Waste Regulations

The project would be located within City limits and would be provided solid waste collection and disposal services by a licensed contractor requiring compliance with federal, state, and local solid waste regulations. Therefore, there would be no impact.

16.5.3 Impacts of the Proposed Project

Impact PSU-1: Introduce in a new service population requiring the construction of new or altered police, fire protection, or emergency medical services facilities (Class III).

Fire Protection and Emergency Medical Services

The nearest fire station (Station No. 17) is located 0.6 mile from the project site. Using an average travel speed of 25 miles per hour, a fire engine dispatched from the station would reach the project in less than two minutes, which is less than their eight-minute average for 90 percent of all incidents and well within the allowable travel time to meet the Fire Department's response time objective of five minutes for single unit and 10 minutes for multiple unit responses to the source. The Fire Department indicated that it expects to be able to serve the project with existing stations. The project site would be served with vehicle access point from all surrounding roadways and thus would meet California Fire Code requirements for emergency access.

Although the addition of new residents and commercial services to the project site would increase the demand for fire services, implementation of the project is not anticipated to have an adverse effect on response times for fire protection and emergency services and would not affect the Fire Department's ability to serve the project or City at large.

The project would be required to comply with all applicable State building and fire codes. These codes require a development plan that provides for fire protection systems, ingress and egress, maximum occupancy limitations, and construction techniques and materials dictated by

the proposed use of the structure (refer to the City of Dublin's Municipal Code, Chapter 5.08, Fire Code).

Specifically, the Fire Department would review the development plan for conformance with locally-defined performance standards, including the California Fire Code, as adopted by the Fire Department, and California Building Code standards. Site access, capacity of the water mains, road widths and turning radii, road grades, surfacing, load bearing capability, sprinkler systems, stand pipes, smoke detectors, and fire alarms would also be reviewed for consistency with Fire Department standards.

The project will be required to fund on-site and off-site improvements consistent with existing City regulations and requirements. The City would collect public facilities fees (per Chapter 7.78 of the City of Dublin Municipal Code) from the project applicant to help off-set fire protection-related capital improvements and on-going maintenance expenses incurred by the project prior to issuance of a Building Permit.

Police Services

The Alameda County Sheriff's Office, acting as Dublin Police Services, would serve the project with law enforcement services. The project would require additional police protection services associated with additional residential dwelling units and commercial uses. The project would be expected to generate 400 to 500 emergency calls annually.

Although the addition of new residents and commercial services to the project site would increase the demand for police services, implementation of the project is not anticipated to have an adverse effect on response times for police services and would not affect the Sheriff's Office ability to serve the project.

The project would be required to comply with Chapter 7.32.300 (Building Security) and Chapter 7.32.310 (Nonresidential building security) of the City's Building Code, which includes building standards aimed at reducing law enforcement calls within the City. In addition, the City would collect public facilities fees (Chapter 7.78 of the City of Dublin Municipal Code) to help off-set police service capital improvements and on-going maintenance expenses incurred by the project prior to issuance of a building permit to ensure that the project will not cause impacts on law enforcement services.

For these reasons, the project would not trigger the need to construct new police, fire, or emergency facilities or alter existing facilities. Therefore, impacts would be Class III, less than significant.

Impact PSU-2: Require the construction of new or expanded educational facilities (Class III).

Project Student Generation vs. Projected Student Generation

Using the student generation rates identified in [Table 16-6: Dublin Unified School District Student Generation Rates by Housing Type](#), the total number of students that would be

generated by the project were calculated. There would be 200 elementary students, 83 middle school students, and 71 high school students, for a total of 354 new students, generated by the project. The estimated number of students to be generated is shown in comparison to the number of students projected to be generated by the project site in the 7-Year Student Population Projections; see **Table 16-7: Estimated Project Student Generation vs. DUSD Projections**.

The DUSD's 7-Year Student Population Projections (DUSD, 2019) projected future student population by Study Area based on future anticipated residential development between 2019 and 2025. The project site comprises all of Study Areas 120A and 106 and part of Study Areas 102 and 127. Therefore, the estimated student populations for those Study Areas are analyzed below.

Table 16-6: Dublin Unified School District Student Generation Rates by Housing Type

School Level	Housing Type		
	Single Family Detached	Single Family Attached	Multi Family
Elementary School (K-5)	0.427	0.303	0.152
Middle School (6-8)	0.156	0.128	0.086
High School (9-12)	0.141	0.095	0.106

Source: DUSD, 2019.

Table 16-7: Estimated Project Student Generation vs. DUSD Projections

Residential Type	Students Generated			Total
	Elementary School	Middle School	High School	
150 Single Family Units (Detached)	64	23	21	108
400 Medium-High Density Units (Single Family Attached)	121	51	39	211
100 Multifamily Units	15	9	11	35
Total (A)	200	83	71	354
<i>DUSD Projected Increase for the Project Site ¹ (B)</i>	<i>212</i>	<i>110</i>	<i>172</i>	<i>494</i>
Difference (A-B)	(12)	(27)	(101)	(140)

Notes:

1. Includes Study Areas 127, 120A, 106, and 102.

Source: DUSD, 2021b and DUSD, 2019.

As shown in **Table 16-7: Estimated Project Student Generation vs. DUSD Projections**, the project would generate 140 fewer students than those projected to be generated by Study

Areas 127, 120A, 106, and 102. However, as shown in **Table 16-2: Dublin School District Existing Student Capacity** and detailed below, DUSD is experiencing school capacity constraints, to which the project would contribute.

School Capacity

Elementary and high school DUSD facilities as a whole are operating over capacity as of Fall of 2020 while middle school facilities have a remaining capacity of three additional students. The project site is specifically served by Cottonwood Creek Elementary (1.5 miles west), Kolb Elementary School (0.5 miles east), Fallon Middle School (0.5 miles northeast), and Dublin High School (four miles west). Capacity and enrollment projections are discussed for each facility in detail below.

Cottonwood Creek Elementary School (K-5)

The existing elementary facilities at Cottonwood Creek Elementary School are currently 86.1 percent utilized. Total school enrollment is projected to increase to 1,115 students by 2025, an increase of 20.5 percent compared to Fall of 2018 enrollment. The elementary facilities are anticipated to be 92.0 percent utilized for the 2026/2027 school year. Therefore, Cottonwood Creek Elementary School is anticipated to have sufficient capacity to serve the projected elementary student population through at least Spring 2027.

Kolb Elementary School

Kolb Elementary School is projected to have a total enrollment of 925 students by 2025, an increase of 30.2 percent compared to Fall of 2018 enrollment. The school facilities are currently 89.2 percent utilized; however, they are projected to be 100.4 percent utilized by the 2026/2027 school year. Given this greater than 100 percent utilization, the school does not have sufficient capacity to support projected student growth. Portable classrooms may be needed to support future operation.

Elementary Schools District-Wide

There is an expected overall increase in elementary school (TK-5) enrollment of approximately 760 students by Fall of 2025 (a 12.2 percent increase compared to Fall of 2018 enrollment). The existing elementary schools within the District are not anticipated to be able to absorb this projected student growth with Kolb and Murray Elementary Schools projected to operate at 100.4 percent and 135.9 percent utilization during the 2026/2027 school year. Development projections indicate the potential need for an additional flexible K-8 site to be constructed within the eastern or central portion of the District where most of the student growth is expected to occur.

Cottonwood Creek Elementary School (6-8)

The existing middle school facilities at Cottonwood Creek Elementary School are currently 80.2 percent utilized. Total school enrollment is projected to increase to 1,115 students by 2025, an increase of 20.5 percent compared to Fall of 2018 enrollment. The middle school facilities are anticipated to be 134.4 percent utilized for the 2026/2027 school year. Therefore, Cottonwood

Creek Elementary School is not anticipated to have sufficient capacity to serve the projected middle school student population. This projected demand supports the potential need to construct one more flexible K-8 site within the eastern or central portion of DUSD, which is planned in the Dublin Crossing Specific Plan.

Fallon Middle School

Fallon Middle School is projected to have a total enrollment of 1,583 students by 2025, an increase of 6.6 percent compared to Fall of 2018 enrollment. The school facilities are currently 95.4 percent utilized; however, they are anticipated to be 133.5 percent utilized by the 2026/2027 school year. Given this greater than 100 percent utilization, the school does not have sufficient capacity to support projected student growth. This projected demand supports the potential need to construct one more flexible K-8 site within the eastern or central portion of DUSD.

Middle-Schools District-Wide

Over the next seven years, the DUSD's grade 6-8 student population is expected to continue to grow. There is an expected overall increase in enrollment of about 627 students by Fall of 2025 (a 23 percent increase compared to Fall of 2018 enrollment). All three existing middle schools are projected to operate at greater than 100 percent capacity for the 2026/2027 school year. Therefore, projected demand indicates the potential need to construct one more flexible K-8 site within the eastern or central portion of the District where most of the resident student growth is expected to occur.

Dublin High School

It is projected that DUSD enrollment will increase by 1,248 students by Fall of 2025 (an increase of 40.9 percent compared to Fall of 2018 enrollment). The District indicates that much of this projected growth is due to the addition of approximately 650 new residential units per year that are projected for construction through 2023 and the number of larger class sizes currently at the elementary and middle school grades that are due to graduate through to high school in the next seven years.

Dublin High School is projected to have a student enrollment of 4,157 by 2025, 1,658 students more than its current capacity of 2,499. The high school facility is projected to operate at 131.9 percent capacity for the 2026/2027 school year. This projected high school facility demand supports the current construction of the new Emerald High School located at 3600 Central Parkway. According to the latest construction newsletter update, construction has commenced and will be complete by December 2023 with closeout in April 2024. Once fully operational, Emerald High School would have an enrollment of up to 2,500 students which would relieve the projected over-enrollment for Dublin High in 2025.

School Impact Fees

In accordance with Section 65995(h) of the California Government Code, the project would be required to pay school impact fees at the time of the building permit issuance. The DUSD

currently implements a Level 2 fee of \$7.96 per square foot of residential development and \$0.78 per square foot for commercial and industrial uses. These fees are used by the DUSD to mitigate impacts associated with long-term operation and maintenance of school facilities.

The project applicant's fees would be determined at the time of the building permit issuance and would reflect the most current fee amount established by the DUSD. School fees from residential and commercial uses would help fund necessary school service and facilities improvements to accommodate anticipated population and school enrollment growth within the DUSD service area and would allow for the DUSD to allocate these funds as deemed necessary. Pursuant to Government Code Section 65995, payment of development fees is "full and complete mitigation" for impacts on schools. Therefore, the demand on the DUSD as a result of the project is considered a less than significant impact (Class III) on school services, and no mitigation is required.

Impact PSU-3: Create a need for new or expanded park and recreational facilities (Class III).

Implementation of the project would increase the demand for neighborhood and community parks due to the projected increase in the residential population generated by the project. As shown in **Table 16-8: Community and Neighborhood Park Requirements**, the project would not provide enough neighborhood or community parks.

Table 16-8: Community and Neighborhood Park Requirements

Park Type	City Standard (acres/ 1,000 population)	Park Requirement ¹	Parks Provided	Net Difference
Community Park	3.3	5.94	0	(5.94)
Neighborhood Park	1.7	3.06	2.5	(0.56)
Total	5.0	9	2.5	(6.5)

1. Based on a total of 650 residential units at 2.77 persons per household (CA Department of Finance, 2021).

The Parks and Community Services Department Public Facilities Fee would be applied to development at the project site. The Public Facilities Fees would vary according to the size of residential units, the location of the development, and a credit for the dedication of land and funding for construction of the parks. With payment of the City's public facilities fees (Chapter 7.78 of the City of Dublin Municipal Code), the project would have a less than significant impact (Class III) on park and recreation facilities in the City, and no mitigation is required.

Impact PSU- 4: Require new or expanded water supplies or water treatment facilities (Class III).

The project would connect to the existing water lines located within the surrounding roadways. Connections would be looped for redundancy.

DSRSD provides both potable water and recycled water within its service area. However, on March 25, 2019, DERWA found that it cannot meet the combined peak demands and projected

demands of its member agencies (DSRSD and EBMUD) and the City of Pleasanton. DERWA approved Resolution No. 19-3 requesting that its member agencies take action to reduce recycled water demands and implement a connection moratorium due to limited recycled water supply during the peak months. Under this resolution, DSRSD implemented a connection moratorium for new recycled water connections starting March 25, 2019.

As described in the SCS Dublin Development Project Water Supply Assessment (WSA) (see [Appendix G](#)), the unit potable water demand factors used by DSRSD are shown in [Table 16-9: Project Potable Water Demand](#). These standard water use factors were developed for use in the DSRSD 2016 Water System Master Plan (WSMP) and have been refined based on actual water use trends observed in DSRSD's water service area, and were used for water supply planning purposes in the DSRSD 2020 UWMP to project future potable water demands within DSRSD's water service area.

The exterior water use factors presented in the WSMP assume extensive irrigation with recycled water and minimal potable water use. The WSA assumed exterior water use factors based on the current Model Water Efficient Landscape Ordinance (MWELO) guidelines. However, if sufficient recycled water supplies become available in the future, then recycled water can be used to meet the project's irrigation demands and potable water demand would be reduced to the WSMP exterior water use factors.

As shown in [Table 16-9: Project Potable Water Demand](#), the project would generate a potable water demand of approximately 225 acre-feet per year (afy).

Table 16-9: Project Potable Water Demand

Use	Interior Water Use Factor	Exterior Water Use Factor (gpd)	Potable Water Demand (afy)
General Commercial ¹	0.14	7,217	52.29
	255	--	12.15
Medium Density Residential	255	5,100	51.29
Medium-High Density Residential	160	4,220	73.37
Public/Semi Public ¹	0.05	1,555	1.74
	255		30.39
Parks / Public Recreation	125	3,273	3.67
Total			224.9

Notes:

1. Conservatively assumes that the dwelling units associated with the general commercial and public/semi-public land use are medium density.

Source: DSRSD, SCS Dublin Project Water Supply Assessment, July 2022.

DSRSD operates an extensive water recycling program. Recycled water is produced from DSRSD's regional wastewater treatment facilities and distributed to water customers in its service area. However, because recycled water supplies are unavailable for use at the project site, irrigation water demands for the project were assumed to be met with potable water. Should sufficient recycled water supplies become available in the future, recycled water can be used to meet the project's irrigation demands.

According to the DSRSD 2020 UWMP, sufficient potable water supply is available to meet the projected demand for the DSRSD in all hydrologic conditions including five-year droughts beginning in the time period analyzed (2025-2045). The UWMP determined projected water demand based on projected growth within the DSRSD service area, which includes the City of Dublin and the project site. Growth projections used by the UWMP for the City of Dublin were provided by the CA Department of Finance. The Regional Housing Needs Allocation (RHNA) for the City of Dublin was also used to project City growth. The project was analyzed in comparison to both of these growth projections in [Chapter 15, Population and Housing](#) in this document. The UWMP also accounted for the build out of the EDSP, which includes the project site, as a major driver of water demand in the next 20 years.

As discussed in [Chapter 15, Population and Housing](#), the project would not cause an increase in population growth beyond what is anticipated for the City of Dublin by the DOF or required by the 5th or 6th cycle RHNA. Additionally, DSRSD plans to continue to manage potable water demands within its service area through conservation efforts and its recycled water program for non-potable uses.

Though not anticipated, if water supply shortages should occur, DSRSD may invoke its Water Shortage Contingency Plan as described in the UWMP. Therefore, DSRSD would be able to supply potable water for the project with no water supply shortage or the requirement for expanded water supplies. Therefore, project impacts to water supply would be Class III, less than significant.

Impact PSU-5: Require the construction or expansion of new wastewater treatment facilities (Class III).

Conservatively, if all of the project's potable water use exits the project site as wastewater, the project would generate 201 acre-feet per year. This wastewater would exit this site via existing connections to the wastewater line installed beneath Gleason Drive, Dublin Boulevard, Brannigan Street and Tassajara Road. Wastewater lines would be constructed as a part of the project beneath Central Avenue.

The project's wastewater would be accommodated within the DSRSD Wastewater Treatment Plant. Per the DSRSD 2017 Wastewater Treatment and Biosolids Facilities Master Plan, DSRSD's Wastewater Treatment Plant has a total capacity of 75 million gallons per day (mgd). As discussed in [Impact PSU-4](#), the project would not result in the need for additional water supply.

Thus, the wastewater generated by the project site is also accounted for in DSRSD's wastewater projection. Therefore, construction and operational impacts would be Class III, less than significant.

Impact PS-6: Require the construction or expansion of stormwater drainage facilities (Class III).

The rate and amount of surface runoff is determined by multiple factors, including the amount and intensity of precipitation; amount of other imported water that enters a watershed; and amount of precipitation and imported water that infiltrates to the groundwater. Infiltration is determined by several factors, including soil type, antecedent soil moisture, rainfall intensity, the amount of impervious surfaces within a watershed, and topography. The rate of surface runoff is largely determined by topography and the intensity of rainfall over a given period of time.

In accordance with MRP C.3 Requirements and Zone 7 flood control requirements, drainage for the project site would be designed to maintain the existing watershed drainage pattern and avoid any impact to downstream watersheds by reducing the post development runoff for the site to the predevelopment condition by incorporating low impact development features such as bioretention and Silva Cells to treat and reduce stormwater pollutants from entering into the municipal separate storm drain system. The grading design would maintain the north/south sloping layout of the land, matches existing grades along project perimeters, minimizes the use of retaining walls, while minimizing the earthwork cut and fill.

Although the project would increase the amount of impervious surface area within the project site, the use of on-site treatment and detention would prevent a substantial increase in stormwater flows. Furthermore, stormwater discharges from the project and other new developments in the City would be required to comply with the Construction General Permit, MRP Provision C.3 requirements, and incorporate appropriate site-specific LID and source and treatment control measures. Thus, the project would not result in an increase in stormwater runoff due to an increase in impervious surfaces and therefore would not require the construction or expansion of stormwater drainage facilities. Impacts would be less than significant (Class III).

Given that post stormwater run-off would not exceed existing pre stormwater runoff conditions, impacts from the project would be less than significant (Class III).

Impact PSU-7: Generate solid waste that would exceed the capacity of area landfills (Class III).

Solid waste generated by operation of the project is shown in **Table 16-10: Proposed Project Estimated Daily Solid Waste Generation**.

Table 16-10: Proposed Project Estimated Daily Solid Waste Generation

Land Use	Unit	lbs. per Unit per Day ¹	Total lbs. per Day
Commercial Retail	265,000 sf	0.046	12,190
Residential	650 du	12.23	7,950
Hotel	140 rooms	4.00	560
Total	--	--	20,700

Notes:

1. U.S. Census 2009–2013 American Community Survey and CalRecycle, 2015b

Source: Kimley-Horn, 2018

The 20,700 pounds of daily solid waste generated by the project would represent 0.18 percent of the Altamont Landfill permitted maximum daily throughput of 11,150 tons per day. As described above, the Altamont Landfill has adequate capacity.

The project would also generate waste during the construction phase. As stated above, CalGREEN Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that in the absence of a more stringent local ordinance, a minimum of 65 percent of non-hazardous construction (and demolition) debris must be recycled or salvaged. Adherence to the Building Code would reduce total waste generated by demolition and construction, and the waste would be appropriately sorted disposed at landfills with adequate capacity.

Construction and operational impacts would be Class III, less than significant.

16.5.4 Cumulative Impact Analysis

The geographic area for the analysis of cumulative public service and utility service impacts is the service area of provider.

Impact PSU-8: Contribute to cumulatively considerable public services, utilities and service system impacts (Class III).

Public Services

Regarding police and fire protection services, the General Plan includes provisions to provide adequate public services at projected buildout. The project, combined with past, present, and reasonably foreseeable future projects, would not exceed those projections, and impacts to police and fire protection services would be less than significant.

Regarding schools, the Dublin Unified School District is nearing capacity for the majority of its schools by 2024. State law deems new developments' payment of the fees imposed by the DUSD, the amounts of which are restricted by law, adequate mitigation to address impacts to public schools. Developers of present and reasonably foreseeable future projects would be required to pay these fees and therefore, by law, impacts to schools would be less than significant.

Utilities

Regarding water demand, the DSRSD has analyzed water demand for their service area through 2045—inclusive of past, present, and reasonably foreseeable future projects—and finds that adequate entitlement and water supply exists to serve development of the area.

Wastewater generation from cumulative projects would similarly be accommodated within the DSRSD's Wastewater Treatment Facility's total capacity of 17 million gallons per day (mgd), well above their current average treatment rates of 10.5 mgd during dry-weather and 10.9 mgd during wet-weather.

Regarding stormwater, the project would ensure that no net increase in stormwater would leave the project site during a peak storm event and would avoid cumulatively significant stormwater impacts to downstream waterways at times when capacity is most constrained. The project would implement standard pollution prevention measures during construction to ensure that downstream water quality impacts are minimized to the greatest extent possible. In addition, the project would provide water quality measures to prevent pollution during project operations.

Stormwater facilities in the project vicinity either have or will be required to have capacity to serve both the project and planned future development in the service area. Increases in runoff flow and volume from future development must be managed so that the post-project runoff does not exceed estimated pre-project rates and durations, in accordance with Municipal Regional Permit Provision C.3.g. Therefore, the project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to storm drainage.

Regarding electricity and gas, energy impacts are addressed in [Chapter 17 Energy Consumption](#).

Lastly, the Altamont Landfill has estimated a closure year of 2070, which is based upon anticipated tipping tonnage and volume, as well as capacity. Solid waste generation from past, present, and reasonably foreseeable future projects would be accommodated within those capacities.

In conclusion, cumulative impacts to public services, utilities and service systems would be less than significant (Class III).

16.5.5 Level of Significance after Mitigation

Table 16-11: [Summary of Impacts and Mitigation Measures – Public Services](#) summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to public services.

Table 16-11: Summary of Impacts and Mitigation Measures – Public Services, Utilities & Service Systems

Impact	Impact Significance	Mitigation
Impact PSU-1: Introduce in a new service population requiring the construction of new or altered police, fire protection, or emergency medical services facilities (Class III).	Less than Significant	None required.
Impact PSU-2: Require construction of new or expanded educational facilities (Class III).	Less than Significant	None required.
Impact PSU-3: Create a need for new or expanded park and recreational facilities (Class III).	Less than Significant	None required.
Impact PSU-3: Require new or expanded water supplies or water treatment facilities (Class III).	Less than Significant	None required.
Impact PSU- 4: Require new or expanded water treatment facilities (Class III).	Less than Significant	None required.
Impact PSU-5: Require the construction or expansion of new wastewater treatment facilities (Class III).	Less than Significant	None required.
Impact PS-6: Require the construction or expansion of stormwater drainage facilities (Class III).	Less than Significant	None required.
Impact PSU-7: Generate solid waste that would exceed the capacity of area landfills (Class III).	Less than Significant	None required.
Impact PSU-8: Contribute to cumulatively considerable public services, utilities and service system impacts (Class III).	Less than Significant	None required.

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17 Transportation

17.1 Introduction

This chapter evaluates the potential effects of the SCS Dublin project on the circulation system including vehicle miles traveled (VMT), transit, safety, bicycle and pedestrian facilities, and emergency access. Information used to prepare this section is referenced from the following resources:

- Aerial photography
- Project application and related materials
- Replica website (<https://my.replicahq.com>)
- Alameda County Transportation Commission, Congestion Management Program 2021
- Caltrans, *Guide for the Preparation of Traffic Impact Studies*, 2002
- Caltrans, *Vehicle Miles Traveled-Focused Transportation Impact Study Guide*, 2020
- City of Dublin, *Bicycle and Pedestrian Master Plan*, 2014
- City of Dublin, *Eastern Dublin Specific Plan*, 1994, updated 2022
- City of Dublin, *General Plan*, 1985 amended 2022
- City of Dublin, Impact Fees FY 2021-22
- City of Dublin, Resolution No. 199-12 Adopting a Complete Streets Policy
- City of Dublin, *Transportation Impact Analysis Guidelines*, 2021
- City of Livermore, *General Plan*, 2004 amended 2021
- City of Pleasanton, *General Plan*, 2009 amended 2019
- City of Pleasanton, *Pedestrian and Bicycle Master Plan*, 2018
- Fehr and Peers, *Transportation Impact Study Report for North Central Roseville Specific Plan – Parcel 49*, January 2015
- Kittelson & Associates, *City of Dublin Citywide Travel Model Update, 2021 Model Update*, July 2021
- Senate Bill 743 (regarding VMT)
- Transportation Research Board, *Highway Capacity Manual 6th Edition* (HCM 6)
- Caltrans, *Highway Design Manual*, (HDM) 7th Edition
- Tri-Valley Transportation Council, *Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance*, 2017

Relative to level of service (LOS) analysis, Section 15064.3 was added to the State CEQA Guidelines effective December 28, 2018 as part of a comprehensive guidelines update and addresses the determination of significance for transportation impacts under CEQA. This section requires that transportation impact analysis be based on VMT instead of a congestion metric (such as LOS) and states that a project's effect on automobile delay shall not constitute a

significant environmental impact. Per the City's TIA Guidelines, projects which generate more than 50 peak hour trips or propose to amend a General Plan land use designation and substantially increase potential traffic generation must provide an analysis of the project at current planned land use versus proposed land use in the build out condition for the project area, including future cumulative conditions. Therefore, a separate transportation impact analysis that evaluates the project's effect on traffic operations and intersection LOS will be provided in a separate document.

17.2 Scoping Issues Addressed

During the scoping period for the project, one letter from Caltrans and one letter from the City of Pleasanton regarding transportation and circulation was received. A meeting between City of Dublin Staff and City of Pleasanton Staff on May 10, 2022 clarified their comments. Concerns raised included the following:

17.2.1 Caltrans

- Provide justification if the project's VMT is presumed to have a less-than significant VMT impact and is exempt from a detailed VMT analysis
- Provide a detailed VMT analysis if the project does not meet the screening criteria and include the following:
 - Identify a VMT mitigation if necessary, which should support the use of transit and active transportation modes. Potential mitigation measures that include the requirements of other agencies such as Caltrans are fully enforceable through permit conditions, agreements, or other legally-binding instruments under the control of the City.
 - Schematic illustration of walking, biking, and auto conditions at the project site and study area roadways.
 - The project's primary and secondary effects on pedestrians, bicycles, travelers with disabilities and transit performance should be evaluated, including countermeasures and trade-offs resulting from mitigating VMT increases. Access to pedestrians, bicycle, and transit facilities must be maintained.
- Evaluate increased conflicts between bicyclists/pedestrians and vehicles at the Tassajara Road/Santa Rita Road/I-580 interchange area.
- Recommendation to upgrade bike/pedestrian facilities across the interchange to enhance bike and pedestrian safety. Consider the proposed Class II buffered bike lane project on Tassajara Road across the I-580 interchange (Project Ala-580-X10 in the Caltrans District 4 Bike Plan) as a potential project improvement to meet the needs of additional anticipated bicyclists generated by the project.

17.2.2 City of Pleasanton

- Require the developer to contribute its pro-rata share of the improvements to the I-580 interchange pedestrian and bicycle improvements through the City of Dublin's Traffic Impact Fee or by other means.

17.3 Environmental Setting

This section presents information on transportation and circulation conditions in the project area.

17.3.1 Existing Roadway Network

The project area is shown in [Figure 17-1: Study Intersections](#). Regional access to the project site is from Interstate 580 (I-580). Regional project traffic is anticipated to primarily use the I-580 ramps at Hacienda Drive, Tassajara Road, and Fallon Road. Local roadways serving the project site include Dublin Boulevard, Tassajara Road, Central Parkway, Brannigan Street, and Gleason Drive. Project driveways would be located on Gleason Drive, Central Parkway, Finnian Way, Dublin Boulevard, Tassajara Road, and Brannigan Street. Additional details are provided below for the existing street and highway system including transit, bicycle, and pedestrian facilities.

State Highways

Interstate 580 (I-580)

I-580 is part of the interstate freeway system and is located directly to the south of the project site. I-580 extends east-west connecting the project to the San Francisco Bay Area in the west and the City of Livermore and Interstate 5 in the east. The posted speed limit on I-580 is 65 miles per hour (mph) in the project area.

I-580 express lanes were opened in 2016 and are in operation Monday through Friday from 5:00 AM to 8:00 PM. I-580 is a designated route of regional significance in the Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance.

Arterials

Dublin Boulevard

Dublin Boulevard is an east-west roadway that bisects the southern portion of the project site. It is classified as an arterial west of Tassajara Road and a collector east of Tassajara Road. This roadway serves existing residential, office, and retail land uses. Phase 1A of the Kaiser medical office building was constructed on the parcel south of Dublin Boulevard between Keegan Street/Kaiser Road and Lockhart Street. A portion of Phase 1B is under construction and is located on the vacant parcels south of Dublin Boulevard between Carnmore Place and Kaiser Road. The remaining Phase 2 to Phase 3 will be located on the parking area south of the

existing Kaiser Medical Center and the vacant parcels south of Dublin Boulevard between Kaiser Road and the existing Fallon Gateway retail center.

In addition, the Emerald High School is currently under construction and will be located to the east of the project site bounded by Central Parkway to the north, Dublin Boulevard to the south, Chancery Lane and Finnian Way to the west, and residential homes to the east. Primary vehicle access will be provided via Central Parkway with secondary access to the athletic field parking lot off Dublin Boulevard.

On-street parking is not permitted along this roadway and the posted speed limit is 45 mph in the project area. Dublin Boulevard is a divided roadway with five to six lanes in the project area.

Sidewalks exist along both sides of the roadway in the project area, except for along the project frontage. Class II bike lanes also exist along Dublin Boulevard.

The Dublin Boulevard Extension project to extend Dublin Boulevard 1.5 miles from Fallon Road to North Canyons Parkway in Livermore is currently in the design phase. The extension is planned to have four to six travel lanes with a median, Class II buffered bike lanes, sidewalks, a shared use path on the north, curb and gutter, traffic signals, street lighting, landscaped raised median islands, bus stops, and all city street utilities.

Fallon Road

Fallon Road is a north-south arterial extending east of the project site near the City of Dublin eastern border. The roadway primarily serves residential land uses, with retail located at the south end near the I-580 ramps. Westbound and eastbound ramps provide access to I-580.

On-street parking is not permitted along this roadway and the posted speed limit is 45 mph north of the I-580 ramps. The speed limit is 40 mph north of Bent Tree Drive (through Tassajara Road). Fallon Road is a divided roadway in the project area and varies from four lanes in between the I-580 ramps and Central Parkway, six lanes from Central Parkway to Gleason Drive, and four lanes from Gleason Drive to Tassajara Road.

Sidewalks exist along both sides of Fallon Road from south of Central Parkway to Signal Hill Drive/Kingsmill Terrace. Gaps exist in the sidewalk on Fallon Road including north of Signal Hill Drive/Kingsmill Terrace, and near Dublin Boulevard to south of Stoneridge Drive/Jack London Boulevard. Class II bike lanes exist along this roadway from north of the I-580 ramps to Tassajara Road. A Class IB sidepath also exists along this roadway between Gleason Drive and Tassajara Road. No bike lanes exist south of the I-580 ramps.

Tassajara Road

Tassajara Road is a north-south principal arterial extending along the project site (west side). It provides access to Camino Tassajara to the north, which connects to the City of San Ramon and

unincorporated Contra Costa County. I-580 eastbound and westbound ramps are located on this roadway.

On-street parking is not permitted on this road and the posted speed limit is 45 mph in the project area. North of Somerset Lane, the roadway varies between four divided lanes and two undivided lanes. It is a five-lane divided roadway from Somerset Lane to Cascade Creek Lane/Dublin Ranch Drive (two northbound lanes, three southbound lanes), a four-lane divided roadway from Cascade Creek Lane/Dublin Ranch Drive to Central Parkway, a five-lane divided roadway (two northbound lanes, three southbound lanes) from Central Parkway to I-580 ramps, and a six-lane divided roadway from I-580 ramps south into Pleasanton.

Sidewalks and Class II bike lanes exist along most of Tassajara Road. No sidewalks exist along the project frontage.

Minor Arterials

Brannigan Street

Brannigan Street is a two-lane, north-south minor arterial extending along the project site (east side). The roadway extends approximately 0.75 miles and primarily serves residential land uses, with a Lowes Home Improvement center and retail located south of Dublin Boulevard.

On-street parking is striped and permitted along approximately 0.25 miles of this roadway and the posted speed limit is 25 mph in the project area.

Sidewalk exists along Brannigan Street, except along the project frontage and along the undeveloped parcel south of Dublin Boulevard where Brannigan Street is a private street. A Class IB Sidepath exists along this roadway between Dublin Boulevard and Kohnen Way.

Central Parkway

Central Parkway is a three-mile two-lane divided east-west minor arterial that extends through the northern portion of the project site and serves residential land uses, as well as the offices located at the west end, Emerald Glen Park just west of Tassajara Road, James Dougherty Elementary School located east of Hacienda Drive, and Cottonwood Creek Elementary at the east end.

On-street parking is not permitted along this roadway except for a few short segments near residential uses on the east end of the roadway and in front of James Dougherty Elementary School. The posted speed limit is 35 mph in the project area.

Sidewalks exist along both sides of Central Parkway for a majority of the roadway except along both sides of the project frontages. Class II bike lanes exist along both sides of Central Parkway and a Class IB Sidepath exists along the roadway between Brannigan Street and Lockhart Street.

Gleason Drive

Gleason Drive is two-mile east-west minor arterial extending north along the project site. The roadway primarily serves residential land uses, as well as the offices located at the west end of the road and Emerald Glen Park west of Tassajara Road.

On-street parking is not permitted along this roadway and the posted speed limit is 40 mph. Gleason Drive is a four-lane divided roadway, except for a one-block stretch along the project frontage, where it is a two-lane divided roadway.

Sidewalks and Class II bike lanes exist along Gleason Drive, except for along the project frontage, where no sidewalks or bike facilities exist.

Hacienda Drive

Hacienda Drive is a north-south collector located west of the project site and extends approximately two and a half miles from the City of Dublin in the north, to the City of Pleasanton in the south. Hacienda Drive is classified as an arterial south of Dublin Boulevard. The roadway connects nearby offices, corporate campuses, and retail to local single family and multifamily residential land uses. I-580 eastbound and westbound ramps are located on this roadway. A new IKEA store was approved in 2018 (not constructed) west of Hacienda Drive, east of Arnold Road, and between Martinelli Way to the north and I-580 to the south.

On-street parking is not permitted on this road and the posted speed limit is 35 mph. It is a three-lane divided roadway (two northbound lanes, one southbound lane) from Gleason Drive to Central Parkway, a five-lane divided roadway (two northbound lanes, three southbound lanes) from Central Parkway to Dublin Boulevard, and a six-lane divided roadway from Dublin Boulevard south into Pleasanton.

Sidewalks and Class II bike lanes exist along both sides of this roadway.

17.3.2 Pedestrian Facilities

Existing pedestrian facilities in the project area include sidewalks along the west side of Tassajara Road and on the east side of Brannigan Street from Dublin Boulevard to beyond the northern project site boundary. Sidewalks also exist on both sides of Gleason Drive, Central Parkway, and Dublin Boulevard from Tassajara Road to the east and from Brannigan Street to the west. No sidewalks currently exist along the project frontage

17.3.3 Bicycle Facilities

Bicycle facilities are divided into four classes. Class I bike paths are physically separated from motor vehicle lanes and is further divided into Class IA Multi-use Paths and Class IB sidepaths. Class II bike lanes on roadways are marked by signage and pavement striping. Painted buffers may separate the vehicle travel lanes from the bike lane and green bike lane pavement coloring are used to highlight potential conflict zones between vehicles and cyclists. Class III bike routes share the travel lane with motor vehicles and have signs and sharrow striping to guide bicyclists

on paved routes. Class IV bike facilities are protected cycle tracks that provide a physical barrier between motor vehicles and cyclists. **Figure 17-2: Existing Bicycle Facilities** shows the bicycle facilities in the project area.

Direct access to bicycle facilities is provided adjacent to the project site including Class IB sidepaths along Brannigan Street, Finnian Way, Central Parkway, and Dublin Boulevard and Class II bike lanes along Tassajara Road, Gleason Drive, Central Parkway, and Dublin Boulevard.

17.3.4 Transit Facilities

Tri-Valley Wheels has multiple transit routes in the cities of Pleasanton, Dublin, and Livermore. Many routes (such as Route 1, 3, 10R, etc.) operate within the project area, but do not operate near the project site. Only routes that service the nearby area of the project are described in this section. **Figure 17-3: Existing Transit Facilities** shows the transit facilities in the project area. Schedules for each route are current as of May 2022, but may change due to COVID-19 or other external factors.

Route 2 is a local bus route that operates between the East Dublin/Pleasanton BART Station to Positano Hill. In the project area, Route 2 operates on Central Parkway, Tassajara Road, Brannigan Street, and Gleason Drive. On weekdays, Route 2 operates between 7:33 AM to 8:20 AM and between 3:15 PM to 3:45 PM. Route 2 only operates a single trip in the morning and afternoon to serve Fallon Middle School and does not operate on Saturdays or Sundays. The closest bus stop is on Central Parkway at Glynnis Rose Drive.

Route 30R is a local bus route that operates between the West Dublin/Pleasanton BART Station to the Sandia Laboratory in Livermore, CA. In the vicinity of the project site, Route 30R operates on Dublin Boulevard. On weekdays, Route 30R operates between 5:14 AM to 10:50 PM in 30-minute headways. On weekends, Route 30R operates between 5:16 AM to 10:53 PM in 60-minute headways. The closest bus stop is on Dublin Boulevard at Glynnis Rose Drive and Grafton Street.

Route 501a, 501b, and 501c are Dublin School Routes that operate between Dublin High School to Positano Hill. In the vicinity of the project site, Route 501a operates on Gleason Drive, Tassajara Road, and Fallon Road, Route 501b operates on Gleason Drive, Tassajara Road, Central Parkway, and Fallon Road, and Route 501c operates on Dublin Boulevard and Fallon Road. In the morning, it operates between 7:38 AM to 8:10 AM. On Monday, Tuesday, and Thursday afternoons, it operates between 4:05 PM to 4:40 PM. On Wednesday afternoons, it operates between 3:06 PM to 3:41 PM. On Friday afternoons, it operates between 2:41 PM to 3:16 PM. The service is only provided on school days. The closest bus stop area is at the intersections along Gleason Street at Central Parkway and Tassajara Road and Central Parkway at Glynnis Rose Drive.

Route 502 is a Dublin School Route that operates between Dublin High School to the intersection of Central Parkway and Panorama Drive. In the vicinity of the project site, Route 502 operates on Tassajara Road, Dublin Boulevard, and Central Parkway. In the morning, it

operates between 7:32 AM to 8:10 AM. On Monday, Tuesday, and Thursday afternoons, it operates between 4:05 PM to 4:44 PM. On Wednesday afternoons, it operates between 3:06 PM to 3:45 PM. On Friday afternoons, it operates between 2:41 PM to 3:20 PM. The service is only provided on school days. Near the project site, there is a bus stop at the intersections along Central Parkway at Glynnis Rose Drive and Dublin Boulevard at Brannigan Street.

Route 504 is a Dublin School Route that operates between Dublin High School to the intersection of Gleason Drive and Brannigan Street. In the vicinity of the project site, Route 504 operates on Dublin Boulevard, Tassajara Road, Fallon Road, and Gleason Drive. In the morning, it operates between 7:41 AM to 8:10 AM. On Monday, Tuesday, and Thursday afternoons, it operates between 4:05 PM to 4:36 PM. On Wednesday afternoons, it operates between 3:06 PM to 3:37 PM. On Friday afternoons, it operates between 2:41 PM to 3:12 PM. The service is only provided on school days. The closest bus stops are along Gleason Drive at Tassajara Road and Brannigan Street.

17.4 Applicable Regulations, Plans, and Standards

17.4.1 Federal

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 prohibits discrimination toward people with disabilities and guarantees that they have equal opportunities as the rest of society to become employed, purchase goods and services, and participate in government programs and services. The ADA includes requirements pertaining to transportation infrastructure. The Department of Justice's revised regulations for Titles II and III of the ADA, known as the 2010 ADA Standards for Accessible Designs, set minimum requirements for newly designed and constructed or altered State and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities. These standards apply to accessible walking routes, curb ramps, and other facilities.

Surface Transportation Assistance Act Routes (STAA – Federal Designation)

The Surface Transportation Assistance Act (STAA) of 1982 allows large trucks, referred to as STAA trucks that comply with maximum length and width requirements, to operate on routes that are part of the National Network. The National Network includes the Interstate System and other designated highways that were a part of the Federal-Aid Primary System on June 1, 1991; states are encouraged, however, to allow access for STAA trucks on all highways.

17.4.2 State

Senate Bill 743 – Transportation Impacts

Adopted in 2013, Senate Bill (SB) 743 changes how transportation impacts are evaluated under CEQA. Previously, CEQA analysis was conducted using an LOS measurement that evaluated traffic delay. As specified under SB 743 and implemented under Section 15064.3 of the State

CEQA Guidelines (effective December 28, 2018), VMT is the required metric to be used for identifying CEQA impacts and mitigation. In December 2018, the Governor's Office of Planning and Research (OPR) published a Technical Advisory on Evaluating Transportation Impacts, including guidance for VMT analysis. The Office of Administrative Law approved the updated CEQA Guidelines and lead agencies were given until July 1, 2020 to implement the updated guidelines for VMT analysis.

VMT was chosen as the primary metric to better integrate land use and multimodal transportation choices, to encourage alternative transportation, promote greater efficiency, and reduce GHG emissions. The most recent technical guidance on analyzing the transportation impacts under CEQA, released by OPR in December of 2018, provides recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. OPR offered a generalized recommendation of a 15 percent reduction below existing VMT as a threshold of CEQA significance.

For the VMT analysis, OPR recommends using a trip-based assessment of VMT that captures the full extent of the vehicle trip length – even the portion that extends beyond the jurisdictional boundary (trips that extend into another county). This differs from the traditional boundary-based assessment of VMT impacts that quantifies only the length of the vehicle trips that occurs within the boundaries of a jurisdiction.

Additionally, SB 743 also amended the State congestion management program statutes lifting the sunset clause for the designation of infill opportunity zones, where CMP LOS standards would no longer apply.

California Complete Streets Act of 2008

This act requires that the circulation elements of local general plans accommodate a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways in a manner that is suitable to the rural, suburban, or urban context of the jurisdiction. Users are defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and riders of public transportation.

California Transportation Development Act

The Mills-Alquist-Deddeh Act (SB 325) (also known as the Transportation Development Act [TDA]) was enacted in 1971 to improve public transportation services and encourage regional transportation coordination. This law provides funding to be allocated to transit- and non-transit-related purposes that comply with regional transportation plans. The TDA provides two funding sources: 1) the Local Transportation Fund (LTF), which is derived from a ¼ cent of the general sales tax collected statewide, and 2) the State Transit Assistance fund (STA), which is derived from the statewide sales tax on diesel fuel.

California Environmental Quality

The Steinberg Act (SB 743) (also known as the Environmental Act) was enacted in 2013 to shift the focus of transportation analysis from driver delay to reducing greenhouse gas emissions,

creating multimodal networks, and promoting mixed land uses. SB 743 requires the Governor's Office of Planning and Research to amend the CEQA Guidelines to provide alternative level of service metrics for transportation impact evaluations. The alternative criteria must encourage greenhouse gas emissions reductions, support the development of multimodal transportation networks, and promote a diversity of land uses. In August 2014, OPR released a preliminary discussion draft of changes to the CEQA Guidelines for review and comment. Starting on July 1, 2020, agencies analyzing the transportation impacts of new projects must now look at a metric known as vehicle miles traveled (VMT) instead of LOS. VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto our roads, the project may cause a significant transportation impact.

Under the new guidelines, measurements of transportation impacts may include vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.

17.4.3 Local

City of Dublin General Plan

The City of Dublin General Plan establishes the following policies associated with transportation that are relevant to the project:

Guiding Policy 5.2.2.A.1: Design streets to (1) include sufficient capacity for projected traffic, (2) minimize congested conditions during peak hours of operation at intersections, (3) serve a variety of transportation modes including vehicles, bicycles, pedestrians and transit, and variety of users including people with disabilities, children, and seniors, (4) provide continuity with existing streets, and (5) allow convenient access to planned land uses.

Guiding Policy 5.2.2.A.3: The goals, policies, and implementation measures for street design in Section 10.8 of the Community Design and Sustainability Element should be consulted when new streets are being designed and/or existing streets are being modified.

Guiding Policy 5.2.2.A.4: Reserve right-of-way and construct improvements necessary to allow streets to accommodate projected vehicular traffic with the least friction.

Guiding Policy 5.2.2.A.6: The City shall strive to phase development and roadway improvements so that the operating Level of Service (LOS) for intersections in Dublin does not exceed LOS D. However, intersections within the Downtown Dublin Specific Plan area (including the intersections of Dublin Boulevard/San Ramon Road and Village Parkway/Interstate 680 on-ramp) are excluded from this requirement and may operate at LOS E or worse as long as the safety for pedestrians and bicyclists is maintained and impacts to transit travel speeds are minimized.

Guiding Policy 5.2.2.A.7: The City will comply with all provisions of the Alameda County Congestion Management Program and will review proposed development projects to ensure compliance with this Program.

Implementing Policy 5.2.2.B.1: Design streets according to the forecasted demand and maximum design speeds listed above, and to the detailed standards set forth in the City of Dublin's Street Design Standards and Standard Plans which are maintained by the Public Works Department, as well as the listed Additional Policies.

Implementing Policy 5.2.2.B.2: Design and construct all roads in the City's circulation network as defined in Figure 5-1 [Exhibit 3.6-4a] as well as bicycle and pedestrian networks as defined in the City of Dublin Bicycle and Pedestrian Master Plan.

Guiding Policy 5.2.3.A.1: Provide an integrated multi-modal circulation system that provides efficient vehicular circulation while providing a design that allows safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, persons with disabilities, seniors, children, youth, and families; and encourages pedestrian, bicycle, transit, and other non-automobile transportation alternatives.

Implementing Policy 5.2.3.B.1: Provide continuity with existing streets, include sufficient capacity for projected traffic, and allow convenient access to planned land uses.

Guiding Policy 5.3.1.A.1: Support improved local transit as essential to a quality urban environment, particularly for residents who do not drive.

Guiding Policy 5.3.1.A.2: Support the development of a community that facilitates and encourages the use of local and regional transit systems.

Guiding Policy 5.3.1.A.3: Encourage improvements in the Enhanced Pedestrian Areas to improve the walkability of these areas.

Guiding Policy 5.3.1.A.4: Maintain enhanced signal coordination and limit intersection delays on major and RAPID transit routes to minimize delays to transit service.

Implementing Policy 5.3.1.B.2: Require dedication of land and the construction of improvements to support the use of public transit in the community. Improvements could consist of bus turnouts, shelters, benches, real time arrival information, and other facilities that may be appropriate.

Implementing Policy 5.3.1.B.4: Capitalize on opportunities to connect into and enhance ridership on regional transit systems including BART, LAVTA and any future light rail systems.

Guiding Policy 5.4.3.A.1: Plan for all users by creating and maintaining Complete Streets that provide safe, comfortable, and convenient travel along and across streets (including streets, roads, highways, bridges, and other portions of the transportation system) through a

comprehensive, integrated transportation network that meets the requirements of currently adopted transportation plans and serves all categories of users.

Guiding Policy 5.4.3.A.2: Be context aware by maintaining sensitivity to local conditions and needs in both residential and business districts as well as urban, suburban, and rural areas, and will work with residents, merchants, and other stakeholders to ensure that a strong sense of place ensues.

Guiding Policy 5.4.3.A.6: Encourage developers to implement Complete Streets in private transportation infrastructure by providing guidance during the development approval process.

Guiding Policy 5.5.1.A.1: Provide safe, continuous, comfortable and convenient bikeways throughout the City.

Guiding Policy 5.5.1.A.2: Improve and maintain bikeways and pedestrian facilities and support facilities in conformance with the recommendations in the Dublin Bicycle and Pedestrian Master Plan.

Guiding Policy 5.5.1.A.3: Enhance the multi-modal circulation network to better accommodate alternative transportation choices including BART, bus, bicycle, and pedestrian transportation.

Guiding Policy 5.5.1.A.4: Provide comfortable, safe, and convenient walking routes throughout the City and, in particular, to key destinations such as Downtown Dublin, the BART Stations, schools, parks, and commercial centers.

Implementing Policy 5.5.1.B.2: Improve bikeways, bicycle support facilities, and pedestrian facilities in accordance with the Dublin Bicycle and Pedestrian Master Plan in conjunction with development proposals.

Implementing Policy 5.5.1.B.3: Ensure on-going maintenance of bikeways, bicycle support facilities and pedestrian facilities that are intended for public use and located on private property in conjunction with development proposals.

Guiding Policy 5.6.1.A.1: Designate and accommodate truck routes to minimize noise nuisance on residential arterial streets.

Implementing Policy 5.6.1.B.2: Take advantage of opportunities to provide long-term truck parking facilities.

Guiding Policy 5.9.1.A.1: Continue the city's program of requiring developers to contribute fees and/or improvements to help fund off-site improvements related to their projects.

City of Dublin Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan establishes the following policies associated with transportation that are relevant to the project:

Policy 4-24: Require all employment-related development to provide convenient and attractive pedestrian, bicycle, and transit-related facilities to encourage alternate modes of commuting to and from work.

Policy 4-31: Establish a convenient, multi-use, all-weather network of trails, including bike lanes, to link planning area parks, recreation facilities, schools, employment centers and major open space areas to each other and to the surrounding community.

Policy 5-2: Require all development to provide a balanced orientation toward pedestrian, bicycle, and automobile circulation.

Policy 5-3: Plan development in eastern Dublin to maintain Level of Service D or better as the average intersection level of service at all intersections within the Specific Plan area during AM, PM and midday peak periods. The average intersection level of service is defined as the hourly average.

Policy 5-12: BART service to the eastern Dublin/Pleasanton station orients local transit service to provide transit connections between the BART station and all portions of the Specific Plan area.

Policy 5-13: Establish design guidelines for residential and commercial development so that there are clear and safe pedestrian paths between building entrances and transit service stops.

Policy 5-14: Provide transit shelters at major limit stops and bus pullouts on major collector, arterial and major arterial streets.

Policy 5-18: Provide convenient and secure bicycle parking and support facilities at key destinations in eastern Dublin, such as schools, recreation areas, transit stops and commercial centers.

Policy 5-19: Parking requirements in eastern Dublin shall be kept to a minimum consistent with actual parking needs. Allowance shall be made for shared parking in mixed-use areas. Parking requirements may be reduced wherever it can be demonstrated that use of alternative transportation will reduce parking demand.

Policy 5-21: Require all non-residential projects with 50 or more employees to participate in a Transportation Systems Management (TSM) program.

City of Dublin Bicycle and Pedestrian Master Plan

The City of Dublin Bicycle and Pedestrian Master Plan establishes the following guiding and implementing policies associated with transportation that are relevant to the project:

Policy 2-1: Implement and maintain an integrated transportation network that allows safe and convenient travel along and across streets for all users, including pedestrian and bicyclists'

needs and access at key destinations, such as Downtown Dublin, transit stations, and other major destinations.

Policy 2-2: Expand the existing bicycle network on the basis of access to key destinations as per Policy 2-1 above to provide low-stress, bicycle facilities if right of way allows such as buffered bicycle lanes on arterial and collector roadways where appropriate and bicycle routes with sharrows on low-volume residential streets.

Policy 2-3: Require short-term and long-term bicycle parking consistent with the latest version of the California Green Building Standards Code.

Policy 3-1: As a condition of project approval, require private development projects to construct bicycle and pedestrian facilities on site and in the adjacent public right-of-way included in the proposed bicycle system as well as bicycle parking and amenities in accordance with the California Green Building Standards Code. Consider requiring large development projects to provide accessible mid-block cut throughs (or “paseos”).

Policy 3-2: Consult the recommended bicycle and pedestrian network maps and project lists prior to implementation of traffic signals, signal upgrades, and resurfacing/restriping projects.

Policy 3-3: Install pedestrian countdown signals, modify pedestrian clearance intervals on actual walking speed observed in the field, implement density operations (Flash Do Not Walk timing extension for slow walkers, etc.), and install, replace, and upgrade bicycle signal detectors, as necessary, per the California Manual Uniform of Traffic Control Devices (CA MUTCD) with new signal installation and signal modification projects, whenever possible.

Policy 3-4: Implement the City’s Complete Streets Policy by reviewing the transportation network, block size, and development patterns of all proposed projects for consistency with this Plan, the Downtown Dublin Specific Plan, and the Dublin Complete Streets Policy.

Policy 3-7: Continue to implement the City Bicycle and Pedestrian Guidelines on all City capital and private development projects as required by the City. Allow the update of the design guidelines to incorporate the latest MUTCD standards.

In addition to the policies above, the City is currently updating their Bicycle and Pedestrian Master Plan with the following additional proposed projects near the project site:

- Conduct a Complete Streets study to identify bicycle and pedestrian improvements on Tassajara Road, Dublin Boulevard, and Gleason Drive along the project frontage and to determine the feasibility of Class I or Class IV bicycle facilities along these roadways.
- Construct a Class I bicycle path along Central Parkway.
- Construct a Class II buffered bicycle lane and evaluate opportunities to lower the speed limit along Central Parkway and Gleason Drive.

- Improve bicycle and pedestrian access at the intersections of Tassajara Road/Gleason Drive, Brannigan Street/Central Parkway, Brannigan Street/Dublin Boulevard, and Gleason Drive/Brannigan Street, which may include evaluating and designing appropriate protected intersection elements.
- Redesign I-580 interchange ramp terminals at Tassajara Road and Fallon Road to provide safe crossings.

It should be noted that the above projects have not been formally adopted yet and therefore this project would only need to be consistent with the adopted City of Dublin Bicycle and Pedestrian Master Plan in 2014.

Resolution No. 199-12 Adopting a Complete Streets Policy

The City adopted Resolution No. 199-12 on December 4, 2012, which states that the City will create and maintain Complete Streets to provide a safe, comfortable, and convenient travel across streets through a comprehensive, integrated transportation network that meets the adopted current transportation plans and General Plan. The City shall maintain, plan, and design projects affecting the transportation system to be consistent with the City's General Plan, as well as bicycle, pedestrian, transit, multimodal, and other relevant plans. The Complete Streets Policy shall also serve all categories of users including pedestrians, bicycles, persons with disabilities, motorist, movers of commercial goods, users and operations of public transportation, emergency responders, seniors, children, youth, and families.

Developers and private land owners will be encouraged to implement complete streets in private developments through the consistent application of the complete streets elements.

City of Dublin Impact Fees FY 2021-22

The City of Dublin has developed impact fees to be paid by developers for all or a portion of the costs of the construction and acquisition of transportation facilities. These facilities mitigate impacts of developments within the City and assists in implementing the goals and objectives of the City's General Plan and the Eastern Dublin Specific Plan. The proposed project will be subject to the Eastern Dublin Transportation Impact Fee residential and non-residential rates and the Tri-Valley Transportation Development Fee. Residential impact fees are based on the project's density (i.e., the number of units per acre). Non-residential impact fees are based on the land use measurement units (e.g., per student for schools or per bed for hotels) or based on the fee rate, PM peak hour trip rate multiplier, and square feet of the project.

City of Dublin Local Roadway Safety Plan (in progress)

The City is currently developing a Local Roadway Safety Plan (LRSP). The project's consistency with the LRSP will be reviewed during the Site Development Review Permit process, as needed.

City of Dublin Transportation Impact Analysis Guidelines

The City's Transportation Impact Analysis (TIA) Guidelines (July 2021) provides guidance to City staff, applicants, and consultants on the requirements to evaluate transportation impacts for

projects in the City of Dublin. For projects subject to CEQA, the TIA must include an evaluation that addresses the CEQA statute. In addition, the TIA must include a local operational evaluation. The level of analysis will vary based on the size, type and location of the project. A TIA for a simple project may include trip generation estimates, brief documentation of VMT for CEQA compliance, and a site plan review. More complex projects may require a detailed VMT analysis, and an intersection operations analysis documenting the project's effect on the local transportation infrastructure.

17.5 Environmental Impacts and Mitigation Measures

17.5.1 Significance Criteria

CEQA Criteria

The following significance criteria for transportation and circulation were derived from the Environmental Checklist in CEQA Guidelines Appendix G. These significance criteria have been amended or supplemented, as appropriate, to address lead agency requirements and the full range of potential impacts related to this project.

The CEQA Transportation Guidelines were reviewed to determine the level of impact (potentially significant impact, less than significant with mitigation incorporated, less than significant impact, or no impact). A mitigation would be required if the project resulted in a significant impact for one of the following criteria:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

City of Dublin Transportation Impact Analysis Guidelines

Implementation of the project would have a significant transportation impact if it would result in VMT exceeding the thresholds defined in the City of Dublin Transportation Impact Analysis (TIA) Guidelines. Section 4.3.4 of the Guidelines defines the thresholds of significance by land use type as:

- **Residential Projects:** A significant impact occurs if a Proposed Project VMT/capita is greater than 15 percent below the existing Planning Area 4.
- **Office Projects:** A significant impact occurs if a Proposed Project VMT/employee is greater than 15 percent below the existing Planning Area 4 average.

- **Retail Projects:** A significant impact occurs if a Proposed Project causes a net increase in total VMT. The total VMT for Planning Area 4 without and with the project is calculated. The difference between the two scenarios is the net change in total VMT that is attributable to the project.
- **Other Development Projects:** The City will make a determination of the applicable thresholds on a case-by-case basis based on the land use type, project description and setting. Generally, these projects will be analyzed based on how similar they are to residential, office, and retail projects.
 - Student housing and senior housing land uses for example should be treated as residential for screening and detailed VMT analysis.
 - Research and development, industrial, medical offices, and hospital projects may be evaluated as office projects using the VMT/employee metric.
 - Project such as hotels, private schools, religious institutions, and regional parks, should be treated as retail for detailed VMT analysis.
- **Mixed-Use Projects:** Evaluate each component of a mixed-use project independently and apply the significance threshold for each land use type. Alternatively, the evaluation would apply only to the project's dominant use if it generated 80 percent of total daily trips.

17.5.2 Summary of No and/or Beneficial Impact

There are no "no" impacts nor "beneficial" impacts.

17.5.3 Impacts of the Proposed Project

TRANS-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (Class III).

The following describes the project's potential impact on transit, bicycle, and pedestrian circulation as it relates to City programs, plans, ordinances, or policies.

Transit Access and Circulation

The project proposes access for pedestrians to use public transit. Sidewalks and crosswalks are proposed adjacent to the project site to allow for pedestrians to access to existing and future bus stops nearby. Route 2 has its closest bus stop on Central Parkway at Glynnis Rose Drive. Route 30R has its closest bus stop on Dublin Boulevard at Glynnis Rose Drive and Grafton Street. Route 501 has its closest bus stop area at the intersections along Gleason Street at Central Parkway and Tassajara Road and Central Parkway at Glynnis Rose Drive. Route 502 has its closest bus stop along Central Parkway at Glynnis Rose Drive and Dublin Boulevard at Brannigan Street. Route 504 has its closest bus stops on Gleason Drive at Tassajara Road and Brannigan Street.

It is anticipated that in coordination with LAVTA on the future Site Development Review Permit, additional bus stops along the project frontage including but not limited to the frontage along Dublin Boulevard. Each of these existing and future bus stops are accessible to the project site via pedestrian walkways. Therefore, the project would result in a less than significant impact related to City's transit programs, plans, ordinances, or policies.

Bicycle Access and Circulation

The project is proposing to construct Class II bicycle lanes along Gleason Drive between Tassajara Road and Brannigan Street to fill in the gaps in the bicycle facility. The project is not proposing nor responsible for providing any bicycle facilities on Tassajara Road between the I-580 westbound and eastbound ramps to connect the City of Dublin bicycle network to the City of Pleasanton bicycle network. This is consistent with the proposed bicycle network outlined in the City's Bicycle and Pedestrian Master Plan. In addition, the project is not proposing to alter existing bicycle facilities. Therefore, the project would result in a less than significant impact related to City's bicycle programs, plans, ordinances, or policies.

Pedestrian Access and Circulation

The project is proposing to construct sidewalks along its frontage to fill in the gaps in the pedestrian facility. These proposed sidewalks connect to the existing sidewalks and crosswalks adjacent the site to allow residents, employees, and patrons access to nearby transit facilities, as well as residential and commercial uses surrounding the project site. In addition, the project is not proposing to alter existing pedestrian facilities. Therefore, the project would not conflict with plans, ordinances, or policies as it relates to pedestrian facilities and would result in a less than significant impact.

TRANS-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) regarding Vehicle Miles Traveled (Class I).

Per City of Dublin *TIA Guidelines*, each unique land use for the mixed-use project was analyzed separately to determine if the land use would result in a significant VMT impact. Section 4.2 of the City of Dublin *TIA Guidelines* also provides criteria for land use types and intensities that screen out from requiring a detailed VMT analysis because the nature of these land uses is presumed to have a less than significant VMT impact.

Table 17-1: VMT Analysis Results by Project Land Use provides a summary of proposed Project land uses, the analysis methodology for determining a VMT impact, and the significance findings by land use type. The remainder of this section details specific assumptions, justifications, analysis methodologies, and results for each Project land-use type.

Table 17-1: VMT Analysis Results by Project Land Use

Land Use Type	Description	Analysis Methodology	Significance Finding
Residential	Multi-family and Single-family Housing (market-rate)	Travel Demand Model Analysis	Less than Significant
Affordable Housing	Below market rate dwelling units	Screen-Out	Less Than Significant
Hotel	140-room hotel	Screen-out	Less than Significant
Local Retail	Strip retail plaza, casual dining, drive-thru restaurant, bowling/entertainment venue	Screen-out	Less than Significant
Regional Retail	120-bay Topgolf facility	Off-Model Analysis	Significant Impact
Park/Recreation	0.8- and 1.7-acre park and green space	Screen-out	Less than Significant

Residential (Market rate)

Consistent with City *TIA Guidelines*, the City of Dublin Travel Demand Model was used as the principal tool to determine VMT impacts for the project's market-rate residential land uses. The City of Dublin Travel Demand Model is an area specific version of the Alameda County Transportation Commission (ACTC) Travel Demand Model which has a base year of 2020 and a future year of 2040. The base year of the model was used to determine existing residential households and population, as well as residential associated VMT. This was used to calculate the average VMT per capita for Planning Area 4, to establish the threshold of significance defined at 15 percent below the average. **Table 17-2: Dublin Travel Demand Model Residential VMT Threshold** shows the results of this analysis including the target residential per capita VMT threshold of 24.7.

Table 17-2: Dublin Travel Demand Model Residential VMT Threshold

Location	Total Population	Total Household VMT	VMT/Capita
Regional Average (Planning Area 4)	238,459	6,931,247	29.1
Significance Threshold (15% Below average)			24.7

Project residential VMT was calculated using the City Travel Demand Model for both 2020 and 2040 model years. Project land uses were converted into household, employment, and population data to be included in the model. Project traffic analysis zones (TAZs) within the model were updated with this household, employment, and population data per guidelines provided in the Draft City of Dublin Citywide Travel Model Update (2021). These TAZs included 1016, 1021, and 1041. Assumptions regarding conversion from dwelling units to household population were based on existing ratios for adjacent model TAZs present in the model. Splits between service and retail employees were calculated at the following rates:

- **Hotel:** 1 service employee per 5 rooms
- **Commercial:** 1 retail employee per 500 square feet

Model outputs including the total VMT per population were aggregated for the three TAZs from the model associated with the project and were used to calculate average VMT per capita for the project in the 2020 and 2040 model scenarios. **Table 17-3: Dublin Travel Demand Model Residential Project VMT** shows that the project residential VMT per capita in 2020 and 2040 is anticipated to be below the established threshold of 24.7. Therefore, the impact on VMT from the residential component of the project is considered to be less than significant.

Table 17-3: Dublin Travel Demand Model Residential Project VMT

Location	Total Population	Total Household VMT	VMT/Capita
Regional Average (Planning Area 4)	238,459	6,931,247	29.1
Significance Threshold (15% Below average)			24.7
2020 Project Residential VMT	1,779	43,536	24.5
2040 Project Residential VMT	1,779	40,264	22.6

Affordable Housing

Per City of Dublin TIA Guidelines section 4.2.2, if a project contains less than 100 percent affordable housing, the portion that is affordable housing should be screened out of needing a detailed VMT analysis. Therefore, the impact on VMT from the affordable housing component of the project is less than significant.

Hotel

Per City of Dublin *TIA Guidelines* section 4.3.4, a hotel land use should be assessed using the same thresholds as retail land uses. Therefore, the hotel portion of the project would have a significant impact if it caused a net increase in total VMT. Since this hotel would not be a destination hotel, its level of VMT impact can be determined without a detailed VMT analysis.

Similar to retail and grocery stores, typical hotels such as the proposed project hotel most often serve pre-existing needs when their client-base is staying at the hotel not because of the amenities, but because of the area surrounding the hotel. Alternatively, destination hotels do not serve pre-existing needs as they offer special amenities that are not offered elsewhere, and guests typically spend the majority of their time on the destination hotel property.

The hotel component of the proposed project will be a typical hotel and it is likely that guests are choosing the hotel because they are traveling to Dublin for a variety of reasons such as business in the area, visiting family and friends, or visiting other local attractions.

Typical hotels most often can be presumed to reduce trip lengths when a new hotel is introduced within a cluster of existing hotels located near a local destination or attraction. Essentially, a trip to a hotel is expected to occur due to someone planning to travel to Dublin, or the immediate area, but the proximity of the hotel to the surrounding attractions would drive the length of that trip and the resultant impact to the overall transportation system. Most often this means that the impact to the transportation system would be negligible or reduced by the introduction of a new hotel to an area, where people are already traveling and planning on staying unless the hotel significantly affects the local supply of rooms or introduces a significant new attraction.

While a specific market study for the hotel component of the proposed project is not being provided, a map showing the proximity of other similar hotels is provided in **Figure 17-4: Proximity of Project Hotel to Existing Hotels**. Both a quarter- and half-mile buffers were placed around the existing hotels in the area, as well as the proposed project, to visually represent the service area between the proposed project and the existing hotels. As shown in **Figure 17-4: Proximity of Project Hotel to Existing Hotels**, “adding hotel opportunities into the local area, further improving hotel destination proximity. Accordingly, it is appropriate that the proposed project development be presumed, in accordance with OPR’s *Technical Advisory*, that it would not result in a net increase in VMT and support the goals of SB 743. Therefore, the impact on VMT from the hotel component of the project is less than significant.

Local Retail

OPR’s Technical Advisory on Evaluating Transportation Impacts in CEQA specifically addresses some of the key issues surrounding how a local-serving retail store should be evaluated in terms of its VMT impact. As described, the threshold for significance for retail uses is “a net increase.” This means that if a proposed retail use results in additional VMT, it would result in a finding of significance. Note that this threshold is only applicable should the retail components of the project not be screened out for being local serving.

Local-serving retail primarily serves preexisting needs (i.e., it does not generate new trips because it meets existing demand). Because of this, local-serving retail uses can be presumed to reduce trip lengths when a new store is proposed. Essentially, the assumption is that someone would travel to a newly constructed local-serving store because of its proximity, rather than that the proposed retail store is fulfilling an unmet need (i.e., the person had an existing need that was met by the retail located farther away and is now traveling to the new retail use because it is closer to the person’s origin location). This results in a trip on the roadway network becoming shorter, rather than adding a new trip to the roadway network, which would result in an impact on the overall transportation system. Conversely, residential and office land uses often drive new trips, given that they introduce new participants to the transportation system.

The proposed commercial and recreational uses (excluding Topgolf) are all destinations within Dublin that have comparable alternatives in the form of other competing commercial and recreational uses. Therefore, the additional retail uses provided by the Project would most

likely provide shorter trip options to pre-existing and on-site Project induced needs for these goods and services. Therefore, the impact on VMT from the local retail component of the project would be less than significant.

Regional Retail/Recreation

The project is proposing a 120-bay Topgolf recreational facility. Topgolf is a recreation/entertainment destination that provides a gamified driving range experience coupled with HDTVs, climate-controlled hitting bays, a sports bar, and restaurant. Because of the limited number of these large Topgolf locations in the greater Bay Area, they draw from a regional and multi-regional network of users.

The City of Dublin TIA Guidelines state that a significant impact occurs for a regional retail project if the project were to cause a net increase in total VMT for the region. For land uses included in the City of Dublin travel demand model, the total VMT for Planning Area 4 can be calculated in the model with and without the regional retail project to determine the net effect of the regional retail project on total VMT. However, the City of Dublin transportation demand model cannot model unique land uses such as the proposed Topgolf, and therefore an “off-model” approach was used to determine the potential impact.

Per City TIA Guidelines Section 4.3.2, for development projects that use total VMT to determine impacts, the total VMT may be calculated using an off-model method that is backed by substantial evidence:

- Smaller projects may use the total daily vehicle trip generation multiplied by an average trip length determined from the travel demand model or a market research analysis.

Average Trip Length

Market research analysis was conducted to determine the average trip length for Topgolf facilities located in the cities of San Jose, Roseville, and Ontario in California; and Scottsdale, Arizona.

Data from the data company Replica was aggregated for user trips to each Topgolf location for a typical weekday in Fall 2019 in order to use pre-COVID-19 data. Replica data uses an aggregate of cell phone, credit card, transaction, vehicle, census, and built environment data to create mega regional travel demand models that provide metrics of trips categorized by trip purpose, length, time, and other trip attributes. For the purpose of this analysis, only recreation trips to the census blocks containing the four Topgolf locations were considered. The average lengths for these trips were aggregated and are shown in Table 17-4: **Average Topgolf Destination Trip Length**.

Table 17-4: Average Topgolf Destination Trip Length

Location	Average Trip Length (miles)
San Jose, CA	14.6
Roseville, CA	17.7
Scottsdale, AZ	16.1
Ontario, CA	14.3
Average	15.7

Source: Kimley-Horn & Associates and Replica, 2022.

Daily Trips

The estimated daily trips for the proposed Topgolf Facility were calculated based on the Transportation Impact Study Report for North Central Roseville Specific Plan dated January 2015. That study identified a rate of 18 daily trips per hitting bay. The proposed 120-bay facility would then be expected to generate 2,160 daily trips (18 daily trips per bay * 120 bays = 2,160 daily trips).

However, not all trips to the new Topgolf facility would be new trips. A portion of the trips would be existing recreation trips in the region that would select Topgolf instead of their existing planned trip to other recreational facilities. These are considered existing trips, and thus existing VMT, on the regional roadway network that are being changed as a result of the project. The remaining Topgolf trips would then be expected to be new trips to the regional roadway network and introduce an increase (net delta) in VMT.

Topgolf user data showing the split between existing trips and new trips was not available. Therefore, two scenarios (i.e. 100 percent new trips and 100 percent existing trips) were analyzed to determine the potential range of net change in VMT as a result of the project.

100 Percent New Trips

This scenario assumes 100 percent of the Topgolf daily trips are new trips in the region. This would occur if there were a very large latent demand for entertainment and recreation venues that is not being served in the region. Thus, potential customers to the new Topgolf facility currently do not make recreation trips as there is not a viable option for them to do so. Assuming this is the case, Topgolf would be adding the full length of a customer trip to the network and increasing the overall regional VMT. Using the methodology outlined in the City TIA guidelines, the estimated VMT production for the proposed Topgolf facility would be 33,912 daily VMT (2,160 daily trips * 15.7 miles per trip).

100 Percent Existing Trips

This scenario assumes 100 percent of the Topgolf daily trips are existing recreation trips in the region. These trips represent households that are already budgeting and spending recreation

dollars in the region elsewhere. With the introduction of a new Topgolf, it is assumed that these households now select to travel to Topgolf instead of a different recreational venue (movie theater, park, event venue, etc.). Therefore, Topgolf would only be altering an existing trip in the region and would only be responsible for the VMT associated with the net change in length of recreation trips to their facility.

To analyze this comparison, market data from Replica was aggregated for Planning Area 4 of the Alameda County Transportation Commission Countywide Transportation Plan to determine the average recreation trip length in the region. This was compared to the average Topgolf trip length in [Table 17-5: Regional Recreation Trip Length Comparison](#), which shows that the regionwide average trip length is currently lower than the average Topgolf trip length. This means that on average, an existing recreation trip in the region is 1.9 miles shorter than a trip to Topgolf. Using the methodology outlined in the City of Dublin TIA guidelines, the estimated VMT production for the proposed Topgolf facility under this scenario would be 4,104 daily VMT (2,160 daily trips * 1.9 miles per trip).

Table 17-5: Regional Recreation Trip Length Comparison

Use	Average Trip Length (mi)
Recreation Trip Ends in Planning Area 4 (Dublin, Livermore, Pleasanton, Sunol)	13.8
Topgolf	15.7
Net Change in Trip Length	1.9

Source: Kimley-Horn & Associates, 2022.

Topgolf Daily VMT

These two scenarios represent the minimum and maximum potential of VMT production for the Topgolf portion of the project depending on the percent of the trips to the venue that are existing versus new trips. This analysis provides a bounding range for the daily VMT of the Topgolf, which is calculated to be between 4,104 to 33,912 increased daily VMT for the region, depending on if the Topgolf trips are either all new trips or all existing recreation trips. This is shown in [Table 17-6: VMT Range for Topgolf](#).

Table 17-6: VMT Range for Topgolf

Scenario	% New Trips	Daily Trips	Trip Length (miles)	Daily VMT
Topgolf (low range)	0%	2,160	1.9	4,104
Topgolf (high range)	100%	2,160	15.7	33,912

Source: Kimley-Horn & Associates, 2022.

Using either method, the proposed Topgolf would result in a net increase in VMT to the planning area. Per City TIA Guidelines significance criteria, any net increase in VMT to the planning area would constitute a significant impact.

Mitigation for Impact TRANS-2

AQ 2.5: Vehicle Trip Reduction requires the development of a qualifying Commute Trip Reduction (CTR)/ Transportation Demand Management (TDM) plan to reduce mobile emissions for all uses, including the Topgolf development. The TDM plan shall be approved by the City of Dublin prior to the issuance of building permits and incorporated into the project's Codes Covenants and Restrictions (CC&Rs). The TDM plan shall discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking through TDM measures, incentives, strategies and policies.

TDM plans are typically most effective when implemented in the employment setting, specifically with large employers who can take advantage of the collective interests of a large group. For the Topgolf use, the majority of the VMT generated by this use would be VMT from the customer trips and not the employment trips and therefore, a TDM plan would have a minimal effect on reducing the VMT and would not reduce the regional VMT to result in a net decrease. However, even with a minimal effect on VMT, the Topgolf project should still implement a TDM program for its own employees. In addition, the Topgolf could encourage local trips instead of regional trips to their locations by providing promotions or discounts to residents of Dublin or the nearby cities to help reduce the overall VMT by customers being produced by the project.

In addition, the City of Dublin does not yet have a VMT banking fee program or exchange program for the project to potentially fund off-site multimodal improvements within the region that would help to reduce the net overall VMT. In the absence of such a program, the additional VMT for the Topgolf component of the project would result in a significant and unavoidable impact.

Additionally, implementation of **MM TRANS 2-1: Implement Bicycle and Pedestrian Improvements**, would help to further reduce VMT impacts. However, despite the implementation **MM AQ 2.5: Vehicle Trip Reduction** and **MM TRANS 2-1: Implement Bicycle and Pedestrian Improvements**, impacts would remain significant and unavoidable (Class I).

MM TRANS 2-1 Implement Bicycle and Pedestrian Improvements

To encourage mode shift and reduce VMT, prior to approval of the Site Development Review Permit, the project applicant shall work with the Community Development and Public Works Departments to identify and design construct bicycle and pedestrian improvements in the vicinity of the project site (generally within a quarter mile from the project site boundary) as identified in the City's most recently adopted Bicycle & Pedestrian Master Plan.

Perform a complete streets study to identify the appropriate bicycle and pedestrian improvements along Tassajara Road and Dublin Boulevard in the vicinity of the project as identified in the City's most recently adopted Bicycle and Pedestrian Master Plan. The completed street study will include but not be limited to development of street cross-sections to implement Class I or Class IV bike lanes along Tassajara Road between Gleason Drive and I-580.

In addition, prior to issuance of the first building permit for Planning Area 1, the project applicant shall contribute its pro-rata share of the planned improvements to the I-580 interchange pedestrian and bicycle improvements through the City of Dublin's Traffic Impact Fee or by other means. The Project Developer shall enter into an agreement with the City to contribute the Project's pro-rata share of the planned improvements.

Parks and Recreation

Per City of Dublin TIA Guidelines section 4.2.3 public services (e.g., police, fire stations, public utilities, neighborhood parks, and public schools) generally do not increase VMT. Instead, these land uses are often built-in response to developments from other land uses (e.g., office and residential). Therefore, these land uses can be presumed to have a less than significant impact on VMT. Therefore, the impact on VMT from the public parks component of the project which are designed to be neighborhood-serving is less than significant.

TRANS 3 – Increase hazards due to a geometric feature or incompatible uses (Class II).

Project plans were reviewed to determine if there could be any geometric design features that would substantially increase hazards for residents, employees, and patrons accessing the site.

Pedestrian Facilities

Mid-Block Crosswalk Across Central Parkway Between Tassajara Road and Brannigan Street

The project is proposing a mid-block crosswalk across Central Parkway between Tassajara Road and Brannigan Street, connecting Planning Areas 2 and 3. Residents in Planning Area 3 are expected to use this crosswalk to access the retail shops and restaurants in Planning Area 2 and increase pedestrian activity across Central Parkway. Since this mid-block crossing is uncontrolled, there is potential for an increase in pedestrian and vehicle conflicts. A mid-block pedestrian crosswalk is also proposed along Finnian Way within Planning Area 2. Residents north of Finnian Way would use the mid-block crossing to access the retail shops and restaurants located south of Finnian Way.

Due to the limited full access driveways in this planning area, many vehicles are expected to use Finnian Way at Tassajara Road and at Brannigan Street to access the site as these intersections allow for full access (i.e., left turns into and out of the project site). With high pedestrian volumes at the mid-block crossing and high vehicular volumes along Finnian Way, there is

potential for an increase in pedestrian and vehicle conflicts. Therefore, the project would result in a potentially significant impact at these pedestrian crossings.

Implementation of **MM TRANS 3-1: Pedestrian & Bicycle Safety Improvements** would reduce impacts to less than significant (Class III).

Mid-Block of Dublin Boulevard

The project's residential units are located north of Dublin Boulevard while retail shops, restaurants, the bowling alley, and Topgolf are located south of Dublin Boulevard. The location of these uses would increase pedestrian activity across Dublin Boulevard.

North of Dublin Boulevard, there are pedestrian facilities that encourage north/south pedestrian movement down the middle or "spine" of the project. The conceptual design shows these pedestrian and bicycle facilities terminating at Dublin Boulevard between Tassajara Road and Brannigan Street, which may encourage pedestrians to illegally jaywalk across Dublin Boulevard mid-block. Therefore, the project may increase vehicular and pedestrian conflicts and result in a potentially significant impact.

Implementation of **MM TRANS 3-1: Pedestrian & Bicycle Safety Plan** would reduce impacts to less than significant (Class III).

Mitigation for Impact TRANS 3-1

MM TRANS 3-1: Pedestrian & Bicycle Safety Improvements

To increase pedestrian and bicycle safety and reduce vehicle conflicts at the mid-block crossings along Central Parkway and Finnian Way between Tassajara Road and Brannigan Street, as well as along Dublin Boulevard; the applicant shall submit pedestrian and bicycle safety improvements as part of the Site Development Review Permit. These improvements shall include detailed plans and associated information that identify the recommended appropriate pedestrian crossing treatments. Specific recommended improvements include but are not limited to:

- **Mid-Block Crosswalk Across Central Parkway Between Tassajara Road and Brannigan Street:** Applicant shall work with the City to provide an uncontrolled crosswalk study per California MUTCD and FHWA guidance to determine the appropriate improvements that should be installed at this location. Improvements shall include Rectangular Rapid Flashing Beacon (RRFB), High Intensity Activated Crosswalk (HAWK), or similar device that would increase pedestrian and bicycle safety and reduce vehicle conflicts.
- **Dublin Boulevard:** The design of the pedestrian and bicycle facilities in Planning Area 2 shall consider the potential pedestrian and bicycle safety conflicts and discourage a mid-block crossing. Design solutions may include, but not limited to:

- Placement and layout of pedestrian and bicycle facilities so as not to lead pedestrians and/or bicyclists to cross at an uncontrolled mid-block crossing.
- Formal and informal barriers integrated into the design to deter pedestrians and bicyclists from crossing a roadway mid-block.
- Wayfinding and signage directing pedestrians and bicycles where to safely cross Dublin Boulevard.

Vehicle Access

Project driveways are proposed midblock along the major arterials of Tassajara Road, Gleason Drive, Central Parkway, and Dublin Boulevard. Many of these driveways are unsignalized and limited to a right-in and right-out movement to reduce vehicle conflicts and delays that would arise from vehicles making a left-turn onto the major arterial with high volumes and speeds over multiple travel lanes. Internal to the project site, multiple drive aisles and access points are provided to allow several points of ingress and egress to the different land uses and to limit potential vehicle queuing from the internal drive aisles onto the major arterials. Further evaluation will be completed in the Site Development Review Permit process to confirm that vehicle queuing will not be a safety issue. The project would result in a less than significant impact as it relates to vehicular safety.

TRANS 4: Result in inadequate emergency access (Class III).

Emergency vehicles can access the project site using all project driveways. However, since many driveways are limited to a right-in right-out movement as there are raised medians along Tassajara Road, Gleason Drive, Central Parkway, and Dublin Boulevard, full access is only provided at four locations with one location in Planning Area 1 (Brannigan Street/Lowe's Driveway), two locations in Planning Area 2 (Finnian Way/Tassajara Road and Finnian Way/Brannigan Street) and one location in Planning Area 3 (Brannigan Street/Project Driveway). In addition, the adjacent raised medians consist of landscaping and are not mountable by emergency vehicles. The project would not provide direct access for emergency vehicles to many uses within each Planning Area and would result in a potentially significant impact.

Section 5.08.020 of the City's Fire Code, regulates permit processes, including emergency access. As part of subsequent Site Development Review Permit process, all plans would be reviewed by the City of Dublin Fire Prevention Bureau to ensure there is adequate emergency access consistent with Section 5.08.020. This requirement would reduce potential emergency access impacts to less than significant (Class III).

17.5.4 Level of Significance After Mitigation

Table 17-7: Summary of Impacts and Mitigation Measures – Transportation summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to transportation.

Table 17-7: Summary of Impacts and Mitigation Measures – Transportation

Impact	Impact Significance	Mitigation
TRANS-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (Class III).	Less than Significant	None required.
TRANS-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) regarding Vehicle Miles Traveled (Class I).	Significant and Unavoidable with Mitigation	MM AQ 2-5: Vehicle Trip Reduction MM TRANS 2-1: Implement Bicycle and Pedestrian Improvements
TRANS 3: Increase hazards due to a geometric feature or incompatible uses (Class II).	Less than Significant with Mitigation	MM TRANS 3-1: Pedestrian & Bicycle Safety Improvements
TRANS 4: Result in inadequate emergency access (Class III).	Less than Significant	None required.

17.6 References

Alameda County Transportation Commission, *Congestion Management Program*, October 2021.

Caltrans, *Guide for the Preparation of Traffic Impact Studies*, December 2002.

Caltrans, *Vehicle Miles Traveled-Focused Transportation Impact Study Guide*, May 20, 2020.

Caltrans, *Highway Design Manual*, 7th Edition, updated 2020.

City of Dublin, *Bicycle and Pedestrian Master Plan*, October 7, 2014.

City of Dublin, *Eastern Dublin Specific Plan* 1985; updated 2022.

City of Dublin, *General Plan*, 1985 amended 2022.

City of Dublin, *Impact Fees FY 2021-22*, 2021.

City of Dublin, *Resolution No. 199-12 Adopting a Complete Streets Policy*, December 4, 2012.

City of Dublin, *Transportation Impact Analysis Guidelines*, July 15, 2021.

City of Livermore, General Plan, 2004 amended July 2021.

City of Pleasanton, General Plan, July 21, 2009 amended 2019.

City of Pleasanton, Bicycle and Pedestrian Master Plan, 2018.

Fehr and Peers, *Transportation Impact Study Report for North Central Roseville Specific Plan – Parcel 49*, January 23, 2015.

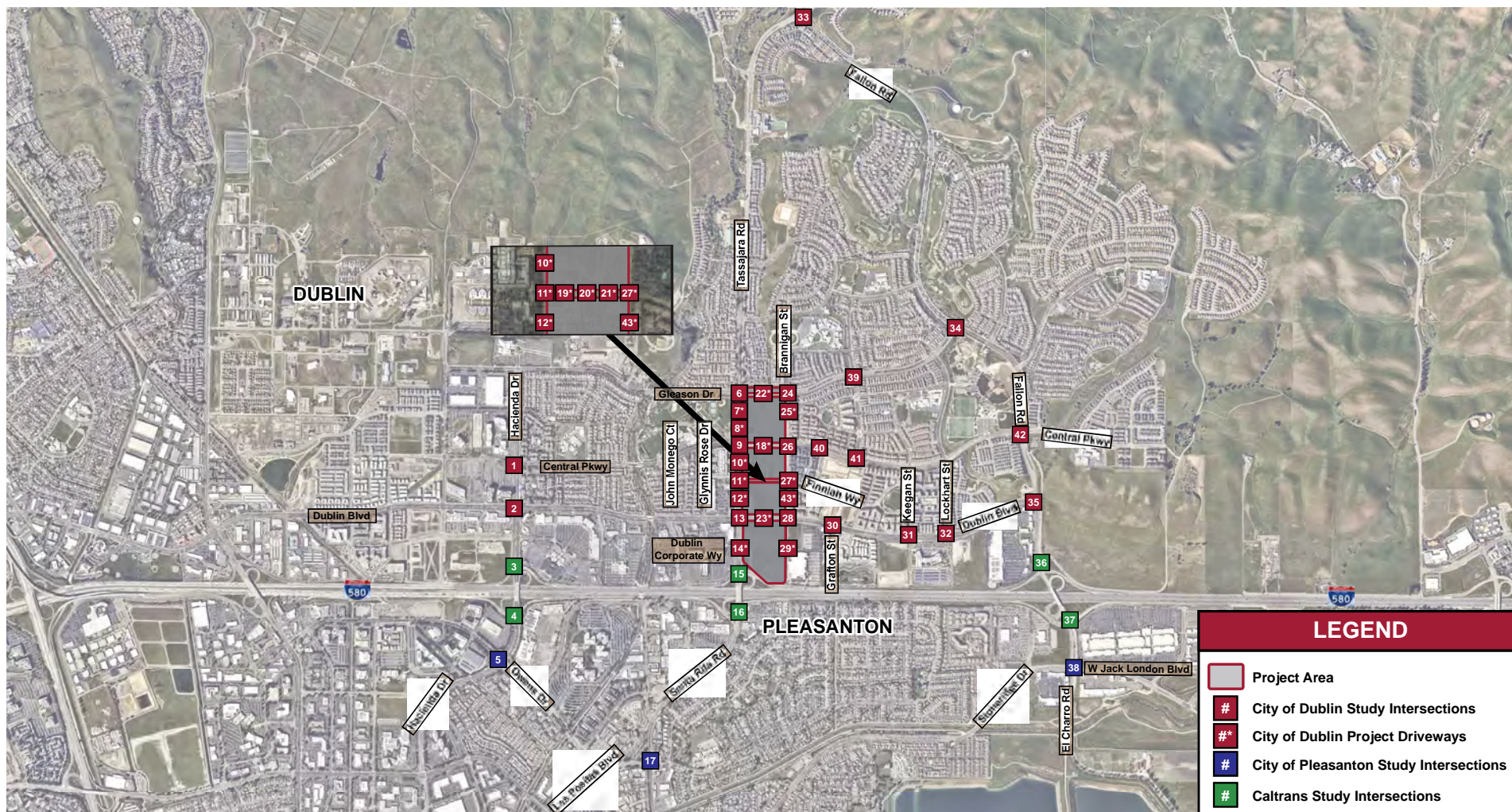
Governor's Office of Planning and Research State of California, *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018.

Kittelson & Associates, *Draft City of Dublin Citywide Travel Model Update, 2021 Model Update*, July 2021.

Replica. 2022. *Replica*. Retrieved May 12, 2022 from <http://www.my.replicahq.com>

Transportation Research Board, *HCM Highway Capacity Manual 6th Edition*, October 2016.

Tri-Valley Transportation Council, Final Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance, September 2017.



Source: Kimley-Horn, 2022

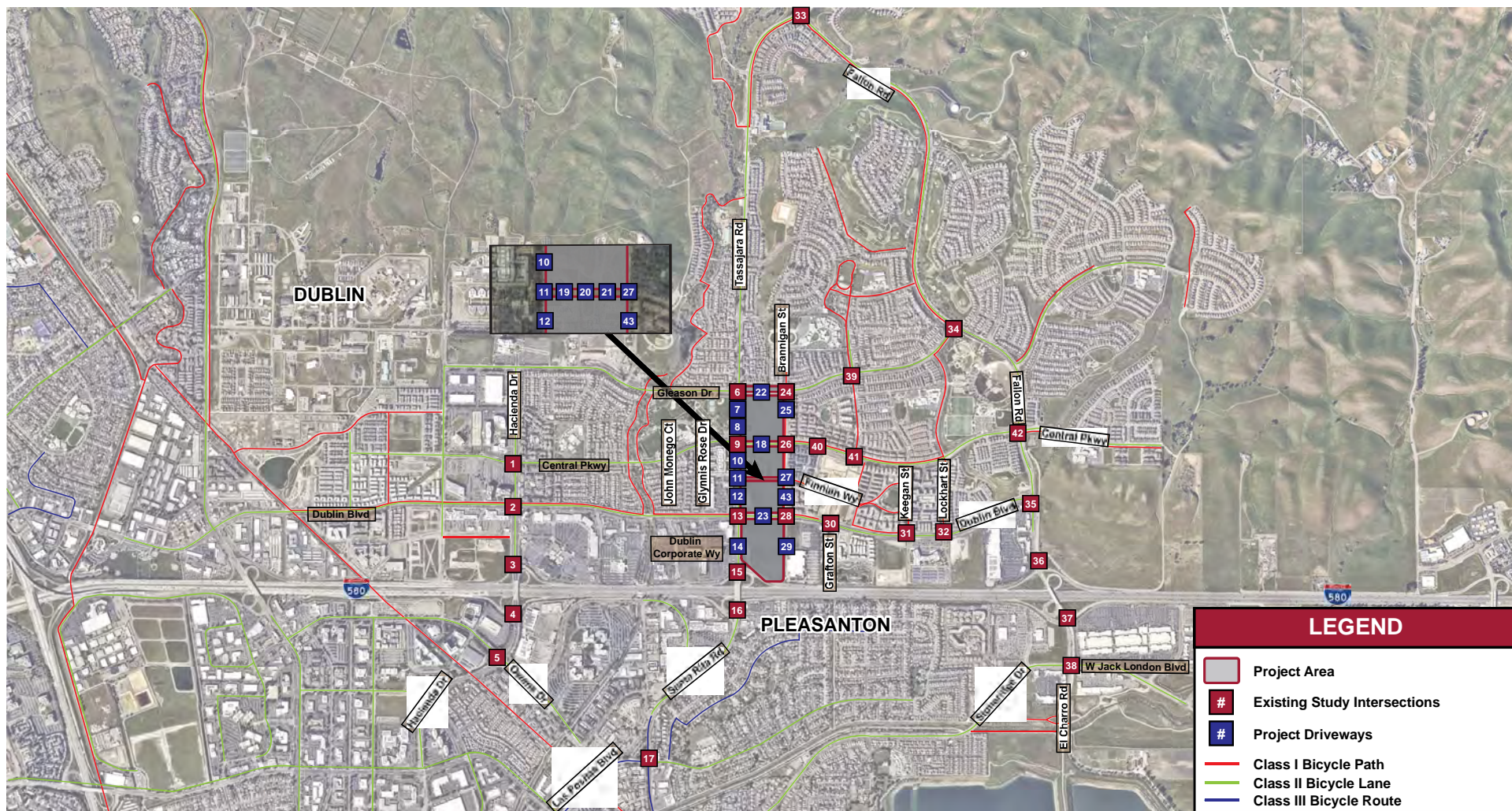
Figure 17-1: Study Intersections

SCS Dublin Project
Environmental Impact Report



Not to scale

Kimley»Horn
Expect More. Experience Better.



Source: Kimley-Horn, 2022

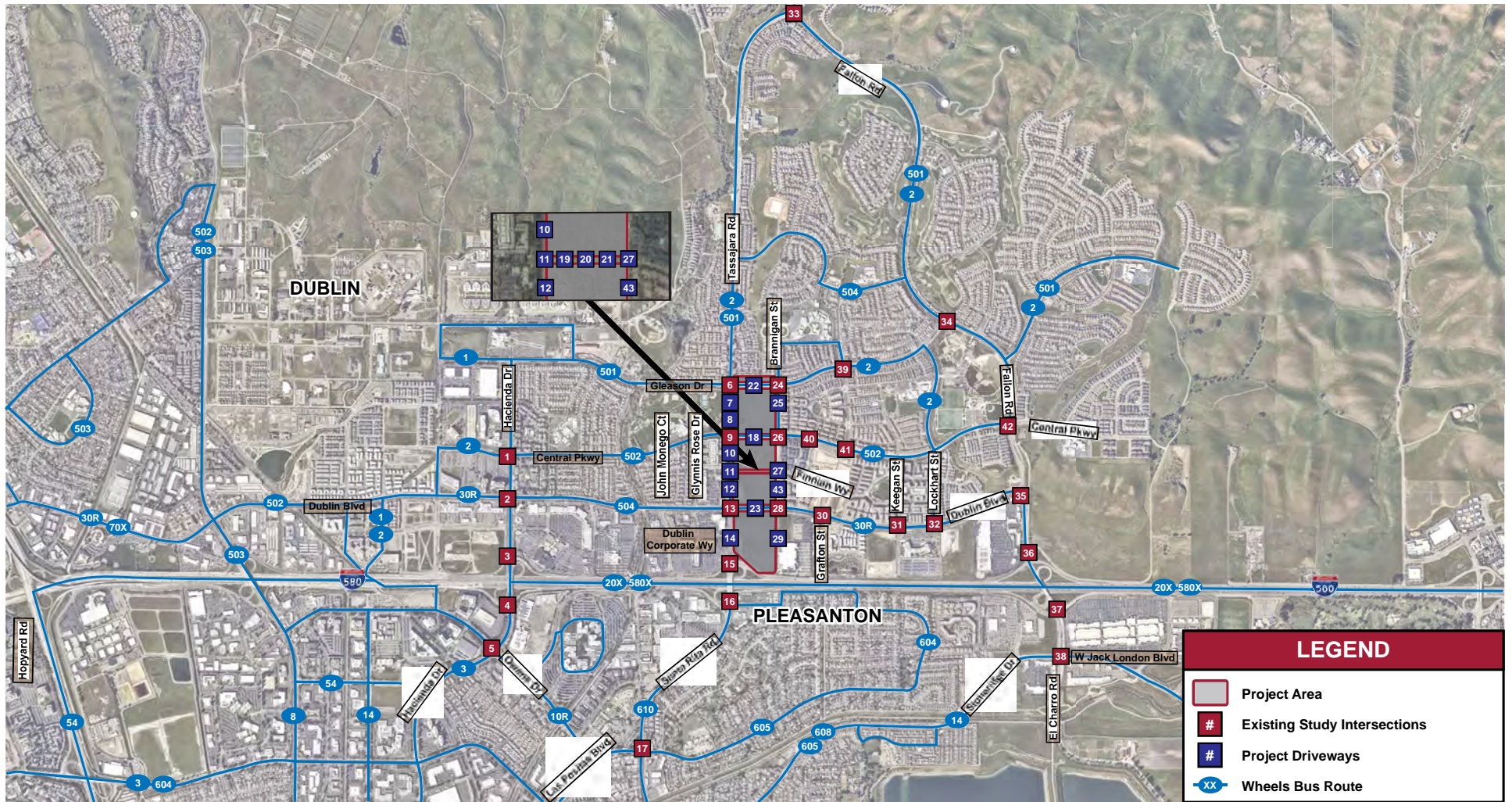
Figure 17-2: Existing Bicycle Facilities

SCS Dublin Project
Environmental Impact Report



Not to scale

Kimley»Horn
Expect More. Experience Better.



Source: Kimley-Horn, 2022

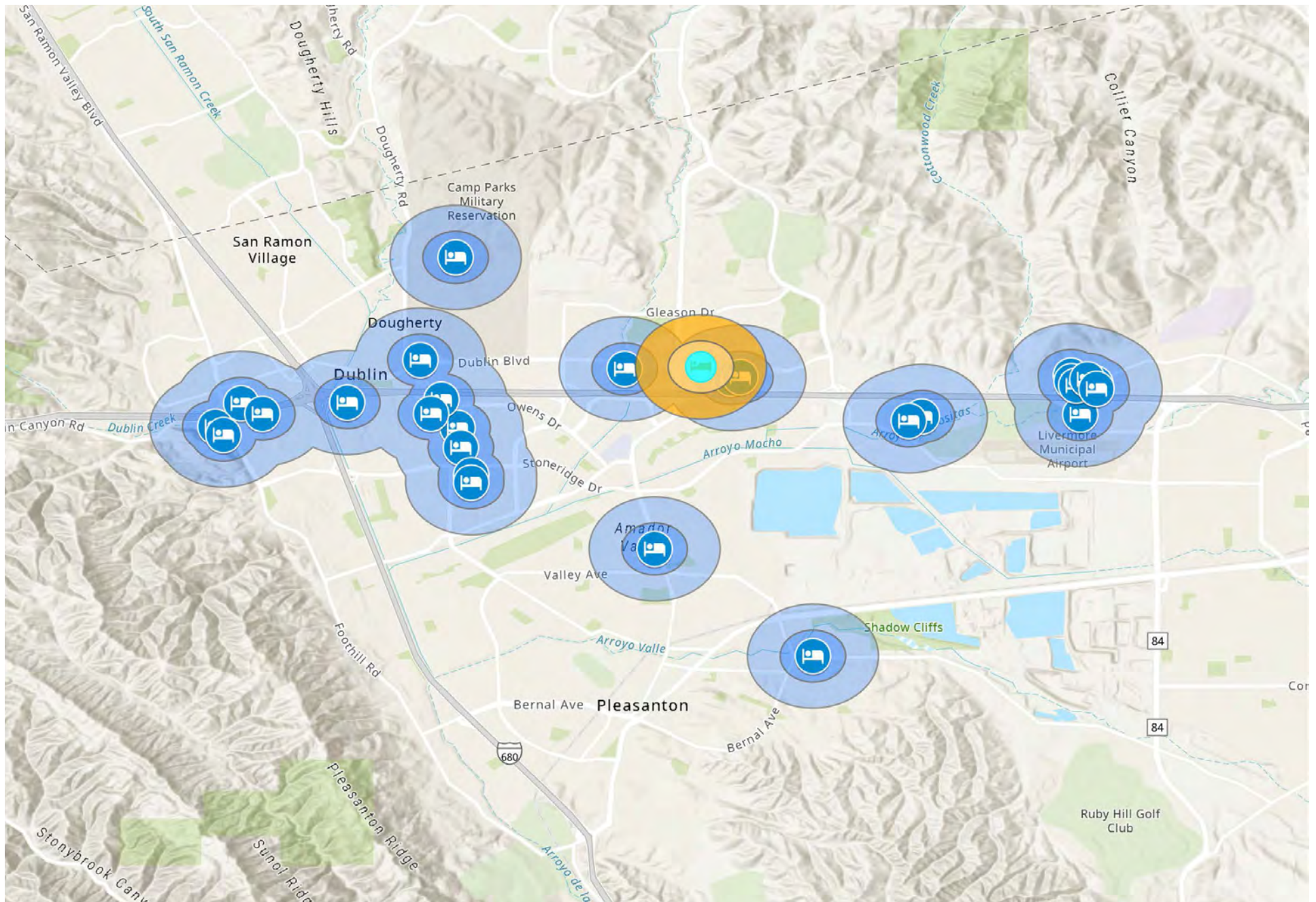
Figure 17-3: Existing Transit Facilities

SCS Dublin Project
Environmental Impact Report



Not to scale

Kimley»Horn
Expect More. Experience Better.



Source: Kimley-Horn, 2022

Figure 17-4: Proximity of Project Hotel to Existing Hotels

SCS Dublin Project
Environmental Impact Report



Not to scale

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18 Energy Conservation

18.1 Introduction

According to Appendix F of the State CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of energy including decreasing reliance on natural gas and oil and increasing reliance on renewable energy sources. The project would be constructed to Title 24 standards, which would reduce energy demand as compared to traditional development. Therefore, the project would not result in substantial or wasteful consumption of energy.

This section describes the existing setting of the project site as it relates to energy conservation; identifies associated regulatory conditions and requirements; presents the criteria used to evaluate potential impacts related to use of fuel and energy upon implementation of the project; and identifies mitigation measures to reduce or avoid each significant impact. The significance of each impact after the incorporation of identified mitigation measures is included at the end of this section. Information used to prepare this section is referenced from the following resources:

- Kimley-Horn, Energy Conservation Technical Data, 2022.

18.2 Scoping Issues Addressed

During the public comment scoping period for the project, no comments regarding energy conservation were received.

18.3 Environmental Setting

This section presents information on the existing energy consumption in the region and project vicinity. This information serves as the baseline for assessing the project's impacts related to energy conservation.

18.3.1 California's Energy Use and Supply

Californians consumed 279,510 gigawatt hours (GWh)²⁰ of electricity in 2020, which is the most recent year for which data is available. Of this total, Alameda County consumed 10,247 GWh (CEC, 2020a). In 2020, the California electricity mix included natural gas (48.35 percent), coal

²⁰ A watt hour is a unit of energy equivalent to one watt of power expended for one hour. For example, a typical light bulb is 60 watts, meaning that if it is left on for one hour, 60-watt hours have been used. One kilowatt equals 1,000 watts. The consumption of electrical energy by homes and businesses is usually measured in kilowatt hours (kWh). Some large businesses and institutions also use megawatt hours (MWh), where one MWh equals 1,000 kWh. One gigawatt equals 1,000 megawatts, or 1,000,000 kilowatts. The energy output of large power plants over long periods of time, or the energy consumption of jurisdictions, can be expressed in gigawatt hours (GWh).

(0.17 percent), large hydroelectric plants (9.40 percent), and nuclear (8.53 percent). The remaining 33.55 percent was supplied from renewable resources, such as wind, solar, geothermal, biomass, and small hydroelectric facilities (CEC, 2020b). In 2015, the state consumed 2 trillion cubic feet²¹ of natural gas (EIA, 2022).

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,802 trillion BTU in 2019 (the most recent year for which this specific data is available), which equates to an average of 198 million BTU per capita. Of California's total energy usage, the breakdown by sector is 39 percent transportation, 23 percent industrial, 19 percent commercial, and 19 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use.²²

In 2002, California established its Renewable Portfolio Standard program²³ with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (*Public Utilities Code* Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020.

In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its Assembly Bill (AB) 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the state's load-serving entities to meet this target. In October 2015, Governor Jerry Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030.

²¹ 100 cubic feet (CCF) is approximately the energy equivalent to burning 100 cubic feet of natural gas. 100 CCF of natural gas equals 103,700 a British Thermal Unit (BTU). A BTU is the amount of energy needed to raise the temperature of one pound of water by one degree Fahrenheit. A kBTU is 1,000 BTUs. A therm is 100,000 BTUs.

²² EIA (US Energy Information Administration), California State Profile and Energy Estimates, updated May 19, 2022, <http://www.eia.gov/state/data.cfm?sid=CA#ConsumptionExpenditures> and https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=US&sid=CA, accessed May 2, 2022.

²³ The Renewable Portfolio Standard is a flexible, market-driven policy to ensure that the public benefits of wind, solar, biomass, and geothermal energy continue to be realized as electricity markets become more competitive. The policy ensures that a minimum amount of renewable energy is included in the portfolio of electricity resources serving a state or country.

Additional energy efficiency measures beyond the current regulations are needed to meet these goals as well as the AB 32 greenhouse gas (GHG) reduction goal of reducing statewide GHG emissions to 1990 levels by 2020 (see [Chapter 6: Air Quality](#), and [Chapter 10: Greenhouse Gases](#), for a discussion of AB 32). Part of the effort in meeting California’s long-term reduction goals include reducing petroleum use in cars and trucks by 50 percent, increasing from one-third to one-half of California’s electricity derived from renewable sources, doubling the efficiency savings achieved at existing buildings and making heating fuels cleaner; reducing the release of methane, black carbon, and other short-lived climate pollutants, and managing farm and rangelands, forests, and wetlands so they can store carbon (CEC, 2022a).

18.3.2 Current Energy Providers

Electricity

East Bay Community Energy and Pacific Gas & Electric

In 2018, Alameda County and the City of Dublin shifted to local Community Choice Energy (CCE) program East Bay Community Energy (EBCE). EBCE was formed as a Joint Power Authority (JPA) by Alameda County and 11 of its cities and operates as a not-for-profit public agency. In January 2022, standard residential accounts moved from an automatic default service “Bright Choice” which is 80 percent carbon free to EBCE’s product “Renewable 100” which is sourced from California wind and solar facilities. Non-residential customers will default to Renewable 100 beginning in October 2022. The electric energy provided by EBCE is conveyed to customers through Pacific Gas and Electric’s (PG&E) existing infrastructure. PG&E continues to maintain the grid, repair lines, and conduct customer billing within the EBCE service area.

Natural Gas

PG&E operates one of the largest natural gas distribution networks in the country, including 42,141 miles of natural gas transmission and distribution pipelines (PG&E, 2022). In all, PG&E delivers gas to approximately 4.5 million customer accounts in Northern and Central California, including in Alameda County.

As shown in [Table 18-1: Electricity Consumption in Alameda County 2010-2020](#) and [Table 18-2: Natural Gas Consumption in Alameda County 2010-2020](#), both electricity and natural gas consumption in Alameda County has remained relatively constant between 2010 and 2020.

Table 18-1: Electricity Consumption in Alameda County 2010-2020

Year	Electricity Consumption (in millions of kilowatt hours)
2010	10,722
2011	10,979
2012	11,593
2013	10,622
2014	10,305
2015	10,243
2016	10,791
2017	11,090
2018	10,573
2019	10,922
2020	10,247

Source: CEC, 2020a. <https://ecdms.energy.ca.gov/elecbycounty.aspx>

Table 18-2: Natural Gas Consumption in Alameda County 2010-2020

Year	Natural Gas Consumption (in millions of therms)
2010	422
2011	423
2012	411
2013	423
2014	362
2015	359
2016	362
2017	379
2018	377
2019	384
2020	366

Source: CEC, 2020a. <https://ecdms.energy.ca.gov/gasbycounty.aspx>

Transportation Fuel

California's transportation sector uses roughly 39 percent of the energy consumed in the state. In 2016, Californians consumed approximately 13.6 billion gallons of gasoline and 3.5 billion gallons of diesel fuel (EMFAC2021, 2022).

Fuel Consumption

As shown in [Table 18-3: Automotive Fuel Consumption in Alameda County 2010-2020](#), on-road automotive fuel and heavy-duty diesel fuel consumption in Alameda County has remained steady since 2010.

Table 18-3: Automotive Fuel Consumption in Alameda County 2010-2020

Year	On-Road Automotive Fuel Consumption (Gallons)	Heavy-Duty Vehicle/Diesel Fuel Consumption (Gallons)
2010	546,108,000	122,139,000
2011	534,708,000	127,202,000
2012	532,188,000	127,749,000
2013	534,200,000	130,467,000
2014	544,124,000	125,911,000
2015	559,640,000	126,586,000
2016	573,529,000	134,589,000
2017	562,071,000	135,711,000
2018	551,105,000	136,591,000
2019	539,782,000	137,597,000
2020	493,721,300	151,955,624

Source: California Air Resources Board, EMFAC2021.

18.4 Applicable Regulations, Plans, and Standards

This section presents legislation and regulations specifically related to energy conservation. See also [Chapter 6: Air Quality](#), [Chapter 11: Greenhouse Gas Emissions](#), and [Chapter 17: Transportation & Circulation](#), for other policies related to energy use. See [Chapter 16: Public Services, Utilities, and Service Systems](#) for policies related to water consumption.

18.4.1 Federal

National Energy Conservation Policy Act

The National Energy Conservation Policy Act serves as the underlying authority for Federal energy management goals and requirements. Signed into law in 1978, it has been regularly

updated and amended by subsequent laws and regulations. This act is the foundation of most Federal energy requirements.

Energy Policy Act of 2005

The Energy Policy Act of 2005 sets equipment energy efficiency standards and seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can attain Federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; constructing energy-efficient buildings; and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary micro-turbine power plants, and solar power equipment.

Executive Order 13693 (Planning for Federal Sustainability in the Next Decade), signed in 2015, seeks to maintain Federal leadership in sustainability and GHG emission reductions. Its goal is to reduce agency Scope 1 and 2 GHG emissions²⁴ by at least 40 percent by 2025, foster innovation, reduce spending, and strengthen communities through increased efficiency and improved environmental performance. Sustainability goals are set for building efficiency and management, energy portfolio, water use efficiency, fleet efficiency, sustainable acquisition and supply chain GHG management, pollution prevention, and electronic stewardship.

Energy and Independence Security Act of 2007

The Energy and Independence Security Act of 2007 sets Federal energy management requirements in several areas, including energy reduction goals for Federal buildings, facility management and benchmarking, performance standards for new buildings and major renovations, high-performance buildings, energy savings performance contracts, metering, energy-efficient product procurement, and reduction in petroleum use and increase in alternative fuel use. This act also amends portions of the National Energy Policy Conservation Act.

18.4.2 State

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006." AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05) and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In

²⁴ In GHG inventories, direct emissions are Scope 1; indirect emissions from consumption of purchased electricity, heat or steam are Scope 2; and other indirect emissions (such as extraction and production of purchased materials and fuels, transport in vehicles not controlled by the reporting entity, outsourced activities) are Scope 3.

addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Reductions in overall energy consumption have been implemented to reduce emissions. See Chapter 10 (Greenhouse Gas Emissions) for a further discussion of AB 32.

2008 California Energy Action Plan Update

The *2008 Energy Action Plan Update* provides a status update to the *2005 Energy Action Plan II*, which is the State's principal energy planning and policy document (CPUC and CEC, 2008). The plan continues the goals of the original *Energy Action Plan*, describes a coordinated implementation plan for State energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. First-priority actions to address California's increasing energy demands are energy efficiency, demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure), and the use of renewable sources of power. If these actions are unable to satisfy the increasing energy and capacity needs, the plan supports clean and efficient fossil-fired generation.

California Green Building Standards Code

The 2019 *California Green Building Standards Code*, as specified in Title 24, Part 11 of the California Code of Regulations, specifies building standards to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The provisions of this code apply to the planning, design, operation, construction, replacement, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California. The latest California Green Building Standards Code will take effect on January 1, 2023.

Building Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The California Energy Commission (CEC) adopted a new update in 2022, and these new standards became effective on January 1, 2023.

2006 Appliance Efficiency Regulations

The California Energy Commission adopted Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) on October 11, 2006. The regulations were approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both Federally regulated appliances and non-Federally regulated appliances.

While these regulations are now often viewed as “business-as-usual,” they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

Senate Bill 1078 and 107; Executive Order S-14-08, S-21-09, and SB 2X

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the state’s Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California’s commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In April 2011, Governor Brown signed SB 2X, which legislated the prior Executive Order S-14-08 renewable standard.

Executive Order B-30-15 and Senate Bill 350

In April 2015, the Governor issued Executive Order B-30-15, which established a GHG reduction target of 40 percent below 1990 levels by 2030. SB 350 (Chapter 547, Statutes of 2015) advanced these goals through two measures. First, the law increases the renewable power goal from 33 percent renewables by 2020 to 50 percent by 2030. Second, the law requires the CEC to establish annual targets to double energy efficiency in buildings by 2030. The law also requires the California Public Utilities Commission (CPUC) to direct electric utilities to establish annual efficiency targets and implement demand-reduction measures to achieve this goal.

Senate Bill 32

In September 2016, the Governor signed into legislation SB 32, which builds on AB 32 and requires the state to cut GHG emissions to 40 percent below 1990 levels by 2030. With SB 32, the Legislature also passed AB 197, which provides additional direction for updating the Scoping Plan to meet the 2030 GHG reduction target codified in SB 32. CARB has published a draft update to the Scoping Plan and has received public comments on this draft, but has not released the final version.

Recent CEQA Litigation

In California, *Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173 (“CCEC”), the Court observed that *CEQA Guidelines* Appendix F lists environmental impacts and mitigation measures that an EIR may include. Potential issues that may require EIR discussion include:

- The project’s energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

The *Save Lake Tahoe Mountain Area Preservation Foundation v. County of Placer* case found an EIR should address the project's potential to increase its use of renewable energy sources for at least two purposes. First, when the EIR analyzes the project's energy use to determine if it creates significant effects, it should discuss whether any renewable energy features could be incorporated into the project. The EIR's determination of whether the potential impact is significant is to be based on this discussion. Second, if the EIR concludes the project's impact on energy resources is significant, it should consider mitigating the impact by requiring uses of alternate fuels, particularly renewable ones, if applicable.

18.4.3 Local

City of Dublin General Plan

The City of Dublin General Plan includes goals, policies, and actions that encourage the conservation of energy in the Community Design and Sustainability Element and the Energy Conservation Element. The following are goals, policies and implementation measures specifically related to energy that are relevant to the project.

Goal 10.9.2: Encourage Sustainability to provide a high quality of life and to preserve resources and opportunities.

Policy 10.9.3(C): Consider environmentally sensitive and energy-efficient building siting, which minimize impacts from wind, provides shade, reduces stormwater runoff, and maximizes opportunities for passive solar design, where feasible.

Policy 10.9.3(F): Encourage alternative modes of transportation by providing priority parking for carpool and alternative energy vehicles, bicycle racks/lockers, showers for employees, and easy access to adjacent regional trails and transit stops.

Implementation Measure 10.9.4(A): Facilitate environmental and energy-efficient design guidelines that promote good design for new construction.

Implementation Measure 10.9.4(H): Investigate modifications to the Building Code to require integrated, comprehensive, and well-designed sustainable building practices (i.e. water and energy efficiency, resource allocations, and site planning).

Guiding Policy 13.3.2(A)(1): Encourage the installation of alternative energy technology in new residential and commercial development.

Guiding Policy 13.3.2(A)(2): Encourage designing for solar access.

Guiding Policy 13.3.2(A)(3): Encourage energy efficient improvements be made on residential and commercial properties.

Implementing Policy 13.3.2(B)(1): New development proposals shall be reviewed to ensure lighting levels needed for a safe and secure environment are provided—utilizing the most energy-efficient fixtures (in most cases, LED lights)—while avoiding over-lighting of sites. Smart lighting technology (e.g. sensors and/or timers) shall also be employed in interior and exterior lighting applications where appropriate.

Implementing Policy 13.3.2(B)(2): New development projects shall install LED streetlights in compliance with the City's LED light standard.

Implementing Policy 13.3.2(B)(3): In new commercial and residential parking lots, require the installation of conduit to serve electric vehicle parking spaces to enable the easier installation of future charging stations.

Implementing Policy 13.3.2(B)(4): Encourage the installation of charging stations for commercial projects over a certain size and any new residential project that has open parking (i.e. not individual, enclosed garages).

Implementing Policy 13.3.2(B)(5): Encourage buildings (and more substantially, whole neighborhoods) to be designed along an east-west axis to maximize solar exposure. Where feasible, require new development projects to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use; and to use regenerative energy heating and cooling source alternatives to fossil fuels.

Implementing Policy 13.3.2(B)(6): Continue to implement parking lot tree planting standards that would substantially cool parking areas and help cool the surrounding environment. Encourage landscaping conducive to solar panels in areas where appropriate.

Implementing Policy 13.3.2(B)(7): Promote and encourage photovoltaic demonstration projects in association with new development.

Implementing Policy 13.3.2(B)(8): Consider creating a recognition program for commercial or residential projects that install large-scale solar or wind energy systems and to publicly commend and acknowledge businesses or individuals that construct or remodel buildings that save more energy than required by Title 24 or by the Cal Green Building Code.

Eastern Dublin Specific Plan

The Specific Plan features a comprehensive multi-modal transportation and circulation system. The intent is to achieve important environmental benefits, such as reduced air and noise pollution, and increased energy conservation, through the reduction in the number and length of daily vehicle trips associated with new development.

Additionally, through the recycling of organic and man-made materials the total amount of solid waste that needs to be disposed of in landfills can be greatly reduced, saving not only land but also energy and natural resources.

The City of Dublin's Eastern Dublin Specific Plan establishes the following policies associated with transportation and building energy conservation that are relevant to the project:

Policy 4.1: Maintain a reasonable balance in residential and employment-generating land uses by adhering to the distribution of land uses depicted in Figure 4-1, Land Use Map.

Policy 4-13: Locate community-oriented commercial development in the "Town Center" within walking distance or a short ride from most residents, and conveniently served by transit.

Policy 4-14: Encourage the development of neighborhood serving retail and service uses in the "Village Centers" in order to reduce daily vehicle trips, and contribute to the identity and character of the outlying residential areas.

Policy 4-17: Avoid dispersion of commercial uses along major collectors and arterials in a linear (i.e., "strip") development pattern that is oriented solely to vehicular traffic.

Policy 4-18: Encourage the creation of a pedestrian-oriented shopping environment in the Town and Village Centers, while still accommodating the safe movement of vehicular traffic.

Policy 4-19: Encourage mixed-use development in the commercial areas of the Town and Village Centers that contributes to the social, cultural, and economic vitality of the commercial districts.

Policy 5-2: Require all development to provide a balanced orientation toward pedestrian, bicycle, and automobile circulation.

Policy 5-17: Establish a bicycle circulation system which helps to serve the need for non-motorized transportation and recreation in eastern Dublin that is consistent with the Dublin Bicycle and Pedestrian Master Plan.

Policy 8-7: Support ACWMA efforts to develop alternate disposal facilities for organic waste in the Tri-Valley area, particularly for composting and reuse of organic material.

Policy 8-8: Encourage the separation of recyclable materials from the general waste stream by supporting the development of a recycling collection system and facilities.

18.5 Environmental Impacts and Mitigation Measures

The analysis below generally follows Appendix F of the State CEQA Guidelines, which states that the goal of conserving energy implies the wise and efficient use of energy, including decreasing overall per capita energy consumption, decreasing reliance on fossil fuels, and increasing reliance on renewable energy sources.

According to Appendix F, the analysis should include a description of energy conservation measures included as part of the project and should consider whether a project would result in inefficient, wasteful, and unnecessary consumption of energy.

18.5.1 Significance Criteria

Based upon the criteria derived from Appendix F of the State CEQA Guidelines, the project would result in a significant impact related to energy conservation if it would:

- Result in the inefficient, wasteful or unnecessary consumption of energy during project construction or operation.

18.5.2 Summary of No and/or Beneficial Impact

There are no “no” impacts nor “beneficial” impacts.

18.5.3 Impact Assessment Methodology

In determining whether implementation of the project would result in the inefficient, wasteful or unnecessary consumption of fuel or energy, this analysis considers the recommendations of Appendix F (as described above), which states that environmental impact analyses of energy conservation may include:

1. The project’s energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project’s life cycle including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The degree to which the project complies with existing energy standards.
4. The effects of the project on energy resources.
5. The project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.

This section analyzes energy consumption on three sources of energy that are relevant to the project: electricity, natural gas, and transportation fuel for vehicle trips associated with new development, as well as the fuel necessary for project construction. The analysis of project electricity/natural gas usage is based on California Emissions Estimator Model (CalEEMod) modeling, which quantifies energy use for occupancy. The results of the CalEEMod modeling are included in **Appendix B: Air Quality and Greenhouse Gas Emissions Analysis** of this Draft EIR. Modeling related to project energy consumption was based primarily on the default settings in

the computer program for Alameda County. The amount of operational fuel use was estimated using CalEEMod outputs for the project and the California Air Resources Board's Emissions Factor 2021 (EMFAC2021) computer program for typical daily fuel usage in Alameda County. Construction fuel consumption was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

Energy consumption impacts are analyzed below according to topic. Mitigation measures directly correspond with an identified impact.

Impact ER-1: Would implementation of the project result in the inefficient, wasteful or unnecessary consumption of energy during project construction or operation. (Class III)

Construction (Short-Term)

The energy consumption associated with buildout of the project includes electricity usage associated with water usage for dust control, diesel fuel consumption from on-road hauling trips and off-road construction diesel equipment, and gasoline consumption from on-road worker commute and vendor trips. The methodology for each category is discussed below. This analysis relies on the construction equipment list and operational characteristics, as stated in Chapter 6 (Air Quality) and Chapter 10 (Greenhouse Gas Emissions), as well as [Appendix B: Air Quality and Greenhouse Gas Emissions Analysis](#). Quantifications of construction energy consumption are provided for the project.

Electricity Usage

Water Consumption for Construction Dust Control

Electricity usage associated with water consumption for construction dust control is calculated based on total water consumption and the energy intensity for supply, distribution, and treatment of water.

The total number of gallons of water usage is calculated based on acreage disturbed during grading and site preparation, as well as the daily water consumption rate per acre disturbed.

- The total acres disturbed are calculated using the methodology described in Chapter 4.2 of Appendix A of the CalEEMod® User's Guide (Grading Equipment Passes).
- The water application rate of 3,020 gallons per acre per day is from Air and Waste Management Association's Air Pollution Engineering Manual.

The energy intensity value is based on the CalEEMod® default energy intensity per gallon of water for Alameda County.

As summarized in [Table 18-4: Project Energy Consumption During Construction](#), the total electricity consumption associated with water consumption for construction dust control would be approximately 72,487,475 kWh (72,487.5 megawatt hours [MWh]) over the duration of buildout of the project.

Table 18-4: Project Energy Consumption During Construction

Source	Project Construction Usage	Alameda County Annual Energy Consumption	Percentage Increase Countywide
Electricity Use	Megawatt Hours (MWh)		
Water Consumption	72,487	10,247,410	0.7074%
Diesel Use	Gallons		
On-Road Construction Trips ¹	687,192	155,890,839	0.4408%
Off-Road Construction Equipment ²	1,272,611		0.8163%
Construction Diesel Total	1,959,803		1.2572%
Gasoline	Gallons		
On-Road Construction Trips ¹	913,700	553,890,645	0.1650%
1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2021 in Alameda County for construction year 2023 through 2028. 2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (hp)-hour from USEPA. Abbreviations: CalEEMod: California Emission Estimation Model; EMFAC: Emission Factor Model 2021; Sources: Appendix B: Air Quality and Greenhouse Gas Emissions Analysis			

Diesel Usage

On-Road Construction Trips

The diesel usage associated with on-road construction mobile trips is calculated based on vehicle miles traveled (VMT) from vehicle trips (i.e., worker, vendor, and hauling), the CalEEMod default diesel fleet percentage, and vehicle fuel efficiency in miles per gallon. VMT for the entire construction period is calculated based on the total (See [Chapter 6: Air Quality](#) and [Chapter 10: Greenhouse Gas Emissions](#)). Construction fuel consumption was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

As summarized in [Table 18-4: Project Energy Consumption During Construction](#), the total diesel consumption associated with on-road construction trips would be approximately 687,192 gallons over the duration of buildout of the project.

Off-Road Construction Equipment

The construction diesel usage associated with the off-road construction equipment is calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. As summarized in [Table 18-4: Project Energy Consumption During Construction](#), the total diesel consumption associated with off-road construction equipment is approximately 1,272,611 gallons for duration of buildout the project.

Gasoline Usage

On-Road Construction Trips

The gasoline usage associated with on-road construction mobile trips is calculated based on VMT from vehicle trips (i.e., worker, vendor, and hauling), the CalEEMod default gasoline fleet percentage, and vehicle fuel efficiency in miles per gallon using the same methodology as the construction on-road trip diesel usage calculation discussed above. As summarized in **Table 18-4: Project Energy Consumption During Construction**, the total gasoline consumption associated with on-road construction trips would be approximately 913,700 gallons over the duration of buildout the project.

Analysis

In total, construction of the project would consume approximately 72,487,475 kWh (72,487 MWh) of electricity, 1,959,803 gallons of diesel, and 913,700 gallons of gasoline.

As indicated in the environmental setting above, Californians consumed 279,510 GWh of electricity in 2020, of which Alameda County consumed 10,247 GWh. Therefore, construction electricity consumption would represent approximately 0.03 percent of the electricity consumption in the state, and 0.7 percent of the electricity consumption in Alameda County.

In 2023, Californians are estimated to consume approximately 15,355,377,116 gallons of gasoline and approximately 3,683,414,417 gallons of diesel fuel. Alameda County annual diesel consumption was 155,890,839 gallons and gasoline consumption was 553,890,645 gallons. Project construction gasoline consumption would represent 0.2 percent of gasoline consumption in the County, and construction diesel consumption would represent 1.3 percent of diesel consumption in the County over the approximately six-year construction period.

Therefore, based on the project's relatively low construction fuel use proportional to State and County consumption, the project would not substantially affect existing energy or fuel supplies or resources. New capacity/additional sources of construction fuel are not anticipated to be required.

Furthermore, there are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or state. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These engines use highly efficient combustion engines to minimize unnecessary fuel consumption.

The project would entail construction activities that would consume energy, primarily in the form of diesel fuel (e.g., mobile construction equipment) and electricity. **MM AQ-2.1: BAAQMD Basic Construction Mitigation Measures** requires that engine idling for construction equipment is to be limited and that all equipment is properly tuned and maintained to the

manufacturer's specifications. Additionally, the City's Construction and Demolition Debris Ordinance requires that 100 percent of asphalt and concrete be recycled and a minimum of 50 percent of all other materials be recycled. Recycling construction and demolition waste not only keeps it from being transported to the landfill, but also reduces the "upstream" energy consumption from the manufacturing of virgin material in the first place. The project would be required to comply with this ordinance.

Construction activities would be required to monitor air quality emissions using applicable regulatory guidance such as the BAAQMD CEQA Guidelines. This requirement indirectly relates to construction energy conservation because when air pollutant emissions are reduced as a result of monitoring and the efficient use of equipment and materials, this results in reduced energy consumption. There are no aspects of the project that would foreseeably result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities.

As described above, project construction would represent 0.2 percent of gasoline consumption and 1.3 percent of diesel consumption in the County over a six-year period. It should be noted that the CEQA Guideline Appendix F criteria requires the project's effects on local and regional energy supplies and on the requirements for additional capacity to be addressed. A 0.2 percent increase in gasoline and a 1.3 percent increase in diesel for construction fuel demand is not anticipated to trigger the need for additional capacity. Additionally, use of construction fuel would be temporary and would cease once the project is fully developed. As such, project construction would have a nominal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities.

As stated above, there are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or state. Therefore, it is expected that construction fuel consumption associated with the project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. Therefore, potential impacts are considered less than significant.

Operations (Long-Term)

The energy consumption associated with operation of uses pursuant to the project would include building electricity, water, and natural gas usage, as well as fuel usage from on-road vehicles. The methodology for each category is discussed below. Note that this energy resources analysis is consistent with the analysis presented in [Chapter 6 Air Quality](#) and [Chapter 10 Greenhouse Gas Emissions](#). Quantifications of operational energy consumption are provided for the project.

Transportation Energy Demand

The gasoline and diesel usage associated with on-road vehicular trips is calculated based on total VMT from the [Chapter 6](#) and [Chapter 10](#) analyses, as well as the average fuel efficiency

from EMFAC2021 model. The EMFAC2021 fuel efficiency data incorporate the Pavley Clean Car Standards and the Advanced Clean Cars Program.²⁵ As summarized in **Table 18-5: Project Annual Energy Consumption During Operations**, the total gasoline and diesel consumption associated with on-road trips would be approximately 813,737 gallons per year and 1,514,686 gallons per year, respectively.

The EMFAC2021 model includes the fraction of electric vehicles projected to be in the on-road fleet during the assumed first year of operation; however, the fraction of the fleet that is electric is assumed to continue to increase, allowing a decrease in gasoline and diesel consumption. The electricity consumption related to electric vehicle traffic during operation was estimated based on the EMFAC2021 fleet mix and the model year 2028 average kWh/mile for current model electric vehicles. Total electricity usage from the on-road transportation during operation is approximately 15,496,300 kWh per year (15,496 MWh per year).

Table 18-5: Project Annual Energy Consumption During Operations

Source	Project Operational Usage	Alameda County Annual Energy Consumption	Percentage Increase Countywide
Electricity Use		Megawatt Hour/Year (MWh/year)	
Area ¹	14,490	10,247,410	0.1414%
Water ¹	414.4		0.0040%
Mobile	591.9		0.0058%
Operational Electricity Total	15,496.3		0.1512%
Natural Gas Use		Therms/year	
Area ¹	0	366,465,038	0%
Diesel Use		Gallons/Year	
Mobile ²	1,514,686	152,160,799	0.9955%
Gasoline Use		Gallons/Year	
Mobile ²	813,737	510,772,956	0.1593%

Notes:

1. The electricity, natural gas, and water usage are based on project-specific estimates and CalEEMod defaults.

2. Calculated based on the mobile source fuel use based on vehicle miles traveled (VMT) and fleet-average fuel consumption (in gallons per mile) from EMFAC2021. For electric vehicles, model year 2028 electric vehicle fuel economy is used from the DOE Fuel Economy Guide.

Abbreviations: CalEEMod: California Emission Estimation Model; EMFAC2014: California Air Resources Board Emission Factor Model; kBTU: thousand British Thermal Units; kWh: kilowatt-hour; MWh: Megawatt-hour.

²⁵ The California Air Resources Board EMFAC 2017 Technical Documentation (March 2018) notes that emissions are estimated with all current controls active, except Low Carbon Fuel Standards (LCFS). The reason for excluding LCFS is that most of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe). As a result, LCFS is assumed to not have a significant impact on CO₂ emissions from EMFAC's tailpipe emission estimates.

Source	Project Operational Usage	Alameda County Annual Energy Consumption	Percentage Increase Countywide
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Sources: DOE 2016; USEPA 1996.

Analysis

Operation of uses implemented pursuant to the project would consume approximately 15,496.3 MWh per year of electricity, 1,514,686 gallons of diesel, and 813,737 gallons of gasoline.

Californians consumed 279,510 GWh of electricity in 2020, of which Alameda County consumed 10,247 GWh. The project's operational electricity consumption would represent 0.0055 percent of the electricity consumption in the state, and 0.1512 percent of the energy consumption in Alameda County.

In 2023, Californians are estimated to consume approximately 15,355,377,116 gallons of gasoline and approximately 3,683,414,417 gallons of diesel fuel. Alameda County 2028 annual diesel consumption was 152,160,799 gallons and gasoline consumption was 510,772,956 gallons. Project operational consumption of gasoline and diesel would represent 0.01 percent of gasoline and 0.04 percent of diesel consumption statewide. Project operational consumption of gasoline and diesel would represent 0.2 percent of gasoline and 0.99 percent of diesel consumption in the County.

Therefore, operation of uses under the project would not substantially affect existing energy or fuel supplies or resources. The project would comply with applicable energy standards and new capacity would not be required. Impacts would be less than significant in this regard.

Energy Efficiency and Renewable Energy Measures

As discussed above, California's Energy Efficiency Standards for Residential and Non-residential Buildings create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. These standards are incorporated within the California Building Code and are expected to substantially reduce the growth in electricity and natural gas use. For example, requirements for energy efficient lighting, heating and cooling systems, and green building materials are expected to save additional electricity and natural gas. These savings are cumulative, doubling as years go by.

The project would include additional energy efficiency measures per City's Climate Action Plan 2030 and Beyond. For example, the project would install LED streetlights where streetlights are needed. The project also would include energy-efficient outdoor lighting for community and publicly accessible outdoor spaces where feasible. Full cut-off lights and automated outdoor lights on commercial buildings and in publicly accessible places, including open space and parking lots, that adjust for time and seasons would also be utilized.

Photovoltaic solar systems and on-demand water heating systems would be included as an option for home buyers. Photovoltaic systems would be installed on the rooftops of

commercial buildings. On-demand water heating systems would also be included where applicable. Additionally, all structures that do not include solar photovoltaic panels will be “solar ready,” as required by City Municipal Code sections 7.94.060 and 7.94.070. Energy Star appliances and low-flow toilets would be installed for the residential units and low-flow toilets and “smart” control systems would be installed for commercial uses. Light-colored cool roofs would be used for the apartments and commercial buildings and pavement and would be light-colored throughout the project.

Regarding water energy conservation, the project would incorporate drought-tolerant landscaping in commonly-owned areas in the residential and commercial portions of the site. Water-efficient irrigation controls would also be used in the landscape areas. A comprehensive water conservation strategy would be developed as applicable to each respective land use as part of the project plan development. Buildings would also incorporate water-efficient fixtures and appliances, in compliance with Title 24.

The project also reduces transportation energy usage by applying “smart growth” principles as an urban in-fill development with a mix of retail, entertainment, and residential uses adjacent to transit/multi-modal corridors and within two miles of a BART station. The project facilitates the use of existing bus routes with stops adjacent to the project site. The Livermore Amador Valley Transit Authority (LAVTA) runs bus service from the project site (Dublin Boulevard and Tassajara Road) to the BART station with 30-minute headways.

Additionally, the project would improve and complete pedestrian and bicycle connections around its perimeter and through the project site. Bicycle storage would be provided in the multifamily, as required and bicycle racks would be provided near the commercial uses. The project would also improve and complete bicycle lanes and facilities along the perimeter and through the project site that connect with existing bicycle routes.

The project includes landscaped paseos and pedestrian pathways that would directly connect residents and retail patrons with adjacent open space, surrounding neighborhoods and nearby Emerald Glen Park. Sidewalks on the streets surrounding the project site would be improved and a 10-foot public multi-use trail would be constructed on the north side of Central Parkway and an on-street bicycle lane along Dublin Boulevard, Tassajara Road, Central Parkway, and Gleason Drive.

Recent case law (*League to Save Lake Tahoe, Mountain Area Preservation, et al./California Clean Energy Committee v. County of Placer, et al.* (Sierra Pacific Industries, et al., Real Parties in Interest)) (2022) has indicated that an EIR’s analysis of a project’s impacts on energy resources must include a discussion of whether the project would increase its reliance on renewable energy sources to meet its energy demand as part of determining whether the project’s energy impacts are significant. The project would be designed in accordance with the applicable Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations [CCR], Title 24, Part 6). These standards are updated, nominally every three years, to incorporate improved energy efficiency technologies and methods. The Building Official, or

designee shall ensure compliance prior to the issuance of each building permit. The Title 24 Energy Efficiency Standards (Section 110.10) require buildings to be designed to have 15 percent of the roof area “solar ready” that will structurally accommodate later installation of rooftop solar panels. If future building operators pursue providing rooftop solar panels, they would submit plans for solar panels prior to occupancy. As discussed above, the project includes several design features and mitigation measures that would minimize energy consumption. As the Project is required to minimize its energy consumption, its impacts in this regard would be less than significant.

Furthermore, both electricity providers in Alameda County, EBCE and PG&E, are subject to California’s Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement to 50 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat.

The project would be required to adhere to all Federal, State, and local requirements for energy efficiency, including the latest Title 24 standards. Considering these requirements in addition to the project design features described above, the project would not result in the inefficient, wasteful, or unnecessary consumption of building energy. Therefore, potential impacts are considered less than significant.

The project would generate less-than-significant impacts related to energy use. Additionally, the project would incorporate various building and transportation energy saving design features (described above) and comply with the latest State Building Code (Title 24, Part 6 of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020.

The 2019 Standards improve upon the 2016 Standards. Under the 2019 Title 24 standards, residential buildings are expected to be about 7 percent more energy efficient, and when the required rooftop solar is factored in for low-rise residential construction, residential buildings that meet 2019 Title 24 standards would use about 53 percent less energy than those built to meet the 2016 standards. Nonresidential buildings use about 30 percent less energy than those built to meet the 2016 standards. Additionally, the updated 2022 Building Energy Efficiency Standards take effect on January 1, 2023.

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical

areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2019 and went into effect on January 1, 2020 and the updated 2022 CALGreen Code takes effect on January 1, 2023.

18.5.4 Cumulative Impacts

Construction and operations associated with implementation of the project would result in the consumption of fuel and energy, but it would not do so in a wasteful manner. The consumption of fuel and energy would not be substantial in comparison to statewide electricity, natural gas, gasoline, and diesel demand; refer to [Table 18-4](#) and [Table 18-5](#). New capacity or supplies of energy resources would not be required. Additionally, the project would be subject to compliance with all Federal, State, and local requirements for energy efficiency.

The anticipated project impacts, in conjunction with cumulative development in the site vicinity, would increase urbanization and result in increased energy consumption. Potential land use impacts are site-specific and require evaluation on a case-by-case basis. Each cumulative project would require separate discretionary approval and CEQA assessment, which would address potential energy consumption impacts and identify necessary mitigation measures, where appropriate.

As noted above, the project would not result in significant energy consumption impacts. The project would not be considered inefficient, wasteful, or unnecessary with regard to energy. Thus, the project and identified cumulative projects are not anticipated to result in a significant cumulative impact. Therefore, potential impacts are considered less than significant.

18.5.5 Level of Significance After Mitigation

[Table 18-6: Summary of Impacts and Mitigation Measures – Energy Conservation](#) summarizes the environmental impacts, significance determinations, and mitigation measures for the project with regard to energy conservation.

Table 18-6: Summary of Impacts and Mitigation Measures – Energy Conservation

Impact	Impact Significance	Mitigation
Impact ER-1: Encourage activities that result in the use of large amounts of fuel or energy, or use these resources in a wasteful manner (Class III)	Less than Significant	None required

18.6 References

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19 Alternatives

This section describes the CEQA requirements related to alternatives and describes the process used to define alternatives to the project. It describes three alternatives to the project and provides a comparative analysis for each of these alternatives to the project. It includes the evaluation of the No Project Alternative, as required by CEQA, and a comparison of alternatives. Finally, it identifies the environmentally superior alternative.

19.1 CEQA Requirements for Alternatives

CEQA requires that an EIR “...describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.” (CEQA Guidelines §15126.6(a)).

To comply with this requirement, the City of Dublin evaluated possible alternatives based on the following factors:

- Does the alternative accomplish most of the basic project objectives?
- Is the alternative potentially feasible (from economic, environmental, legal, social, technological standpoints)?
- Does the alternative avoid or substantially lessen any significant effects of the project? Alternatives need to be environmentally superior to the project in only some, not all, respects.
- Is the alternative reasonable and realistic? An EIR need not consider an alternative whose effect cannot reasonably be ascertained or whose implementation is remote and speculative, because unrealistic alternatives do not contribute to a useful analysis.

19.2 Consistency with Project Objectives

The basic purpose of an EIR's discussion of alternatives is to suggest ways project objectives might be achieved at less environmental cost. Accordingly, alternatives must be able to meet most project objectives, but they need not have to meet all of them. As stated in the CEQA Guidelines, the EIR's alternatives analysis should focus on alternatives that can eliminate or reduce significant environmental impacts even if they would impede attainment of project objectives to some degree or be more costly (14 CCR §15126.6(b)). The alternatives discussed must, however, be able to attain most of the basic objectives of the project (14 CCR §15126.6(a)).

The determination of whether to eliminate or retain alternatives in this EIR was based on each alternative's ability to meet most or all of the project objectives (see [Chapter 3: Project Description](#)), even if the alternative may be more costly than the project.

19.3 Alternatives Eliminated from Further Consideration

19.3.1 Alternative Location

CEQA Guidelines Section 15126.6(f)(2) sets forth considerations to be used in evaluating an alternative location. The section states that the "key question" is whether any of the significant effects of the project would be avoided or substantially lessened by relocating the project. The CEQA Guidelines identify the following factors that may be taken into account when addressing the feasibility of an alternative location:

- Site suitability
- Economic viability
- Availability of infrastructure
- General Plan consistency
- Other plans or regulatory limitations
- Jurisdictional boundaries
- Whether the project applicant can reasonably acquire, control, or otherwise have access to the alternative site

The CEQA Guidelines establish that only locations that would avoid or substantially lessen the project's environmental effects are feasible and would meet most of the project objectives should be considered as alternative locations for the project.

Because of Alameda County Measure D, which effectively prohibits new urban development outside of city limits in eastern Alameda County, only sites located within the current Dublin city limits are considered feasible.

Given the size of the project and the broad mix of uses proposed, it was determined that there are no other suitable undeveloped parcels that do not already have a pending application nor have existing entitlements in the City of Dublin that could accommodate the land uses envisioned for the project. Additionally, the project applicant does not own or otherwise control property of a similar size.

For these reasons, this alternative was eliminated from further consideration.

19.3.2 Commercial Only Project

This alternative would preclude the development of a mixed-use commercial and residential project as contemplated in the City's General Plan and Eastern Dublin Specific Plan. However, it

would fail to meet most of the basic project objectives as they relate to the development of a mixed use residential and commercial project with a range of types and densities of housing in a Priority Development Area residential uses. For these reasons, this alternative was eliminated from further consideration.

19.4 Alternative 1 – No Project Alternative

19.4.1 Description

In addition to studying a reasonable range of alternatives based on the criteria set forth above, CEQA requires the EIR to analyze a “no-project” alternative. Consideration of the No Project Alternative is required by Section 15126.6(e) of the CEQA Guidelines. The analysis of the No Project Alternative must discuss the existing conditions at the time the Notice of Preparation was published (March 25, 2015), 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” (CEQA Guidelines Section 15126.6 (e)(2)). The requirements also specify that: “If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this ‘no project’ consequence should be discussed” (CEQA Guidelines Section 15126.6 (e)(3)(B)). The No Project Alternative considers the Project site remaining in its current undeveloped state.

19.4.2 Impact Analysis

The No Project Alternative would not advance any of the project objectives and the project site would remain undeveloped for the foreseeable future. No disturbance or new development would occur, thereby eliminating the potential for impacts on any of the environmental resources analyzed in this EIR. Accordingly, this alternative would avoid all of the project’s significant impacts (including significant and unavoidable impacts), as well as the need to implement any mitigation measures.

19.5 Alternative 2 – Existing General Plan and Eastern Dublin Specific Plan

19.5.1 Description

Alternative 2 – Existing General Plan and Eastern Dublin Specific Plan would allow development consistent with existing land use designations and development densities as described in the General Plan and Eastern Dublin Specific Plan. As shown in [Figure 3-3: Existing General Plan Land Use Designations](#), this includes designations of Neighborhood Commercial, General Commercial, Medium High Density Residential, High Density Residential, and Public/Semi-Public. Most the site is designated General Commercial. As shown in [Table 3-1: Eastern Dublin Specific Plan Anticipated Project Site Development](#), the Eastern Dublin Specific Plan assumed a mid-density level of development of 261 residential units and 902,563 square feet of commercial.

As shown in [Table 19-1: Alternative 2 Land Use Summary & Comparison](#), this alternative would have 389 fewer residential units and 637,563 more square feet of commercial uses in comparison to the project.

Table 19-1: Alternative 2 Land Use Summary & Comparison

Land Use Designations	Gross Acres	Res. Units	Du/Acre	Floor Area Ratio	Commercial sq. ft.
General Commercial	60.3	--	--	.4	846,153
Neighborhood Commercial	3.7	--	--	.35	56,140
Medium Density Residential	4.3	43	10	--	--
Medium-High Density Residential	5.3	106	20	--	--
High Density Residential	3.2	112	109	--	--
Public / Semi-Public	3.3	--	--	--	--
Total		261			902,563
Proposed Project	76.9	650	--	--	265,000
Difference		(389)			637,563

19.5.2 Impact Analysis

Because the entirety of the project site is assumed to be disturbed, impacts to Cultural & Tribal Resources, Geology & Soils, Hazards & Hazardous Materials, Hydrology & Water Quality, and construction related Air Quality/GHG Emissions and Noise would be similar to the project. Also, because the types of land uses would be similar and subject to the site and architectural design review, impacts to aesthetics would also be similar.

Impacts to Public Services, Utilities, & Service Systems and Energy Conservation, would generally be similar as this alternative would be developing urban uses, similar to that proposed; with both needing infrastructure to service the site, as well as police, fire, and emergency services.

Because the number people living on the project site would be less, impacts to population and housing would be reduced; however, impacts would not be significant for this alternative, similar to the project.

As shown in [Table 19-2: Alternative 2 Trip Generation Comparison](#), Alternative 2 would generate considerably more trips as compared to the project.

Table 19-2: Alternative 2 Trip Generation Comparison

Scenario	Trip Generation			
	Daily	AM Peak Hour	PM Peak Hour	Saturday Peak Hour
Alternative 2 – Existing General Plan and Eastern Dublin Specific Plan	27,721	740	2,387	3,486
Proposed Project	10,983	644	777	1,307
Difference	16,738	96	1,610	+2,179

Source: Kimley-Horn & Associates, 2022.

Because Alternative 2 would result in more traffic trips, operational impacts to air quality would be greater. The greater number of traffic trips would correspond to more operational noise impacts as well.

With respect to vehicle miles traveled (VMT), Alternative 2 would include 846,153 sf of General Commercial and 56,140 of Neighborhood Commercial, but would not include a Topgolf recreation center. As such, there would be no significant unavoidable impact associated with VMT.

19.6 Alternative 3 – Commercial Development Task Force Land Plan

19.6.1 Background & Context

This alternative is derived from recommendations made by the City of Dublin Commercial Development Task Force (CDTF), as documented in their *Final Summary of Key Recommendations Report*, July 2014. The CDTF was created by the Dublin City Council in March 2014 to examine the potential for additional commercial development throughout Dublin. City staff identified five “opportunity sites” that were the key focus of the CDTF, namely: 1) Downtown Dublin; 2) The Green at Park Place; 3) Dublin Land Company (the project site); 4) The Promenade/Grafton Plaza; and 5) the Chen property.

The purpose of the CDTF was to engage residents and seek their input regarding the remaining undeveloped commercial properties in Dublin. The CDTF was charged with the following three tasks:

1. Classify the desirability of existing commercial sites for future development
2. Define desirable design principles to shape the vision of future commercial development
3. Identify additional economic development incentives to attract and retain commercial uses

The project site was identified as Dublin Land Company (DLC) – Parcel 1 (I-580 to Dublin Boulevard), Parcel 2 (Dublin Boulevard to Central Parkway, and Parcels 3 & 4 (Center Park to the northern boundary, north of Gleason Drive). The CDTF made following land use recommendations:

DCL Parcel 1

A4-1. There is support for the existing land use of General Commercial which allows both office and retail commercial.

A4-2. There is strong support for office uses at this site which should be a priority over retail.

A4-3. Office development should and would complement Dublin Corporate Center and Gateway Medical to the west across Tassajara Road.

A4-4. Do not consider an auto dealership at this location.

DCL Parcel 2

A4-5. Create a “main street” lifestyle experience which incorporates a sense of place, walkable, with gathering areas.

A4-6. Provide opportunities for retail, restaurant and neighborhood serving uses.

A4-7. This site provides a prime location for retail uses since it is on the “going home” side of Tassajara Road.

A4-8. Uses should complement, but not necessarily duplicate, those uses already located at The Shops at Waterford.

A4-9. Develop this parcel as a neighborhood commercial/lifestyle oriented walkable shopping center.

A4-10. A mixed-use residential development, similar in orientation to The Shops at Waterford, is supported here if it includes a strong retail component.

A4-11. The construction timing for the residential portion of a mixed-use development should be tied to the construction of any retail component.

DLC - Parcels 3 & 4

A4-12. These parcels are best suited for medium-density residential.

A4-13. Residential uses should be considered based on existing adjacent uses and the proximity to Emerald Glen Park.

A4-14. Residential development is supported on Parcels 3 and 4 if there is a strong commercial component on Parcel 2.

19.6.2 Description

Based on the recommendations above, particularly recommendation A4-3, this alternative assumes the development of office use south of Dublin Boulevard. This 23-acre area would be developed at a 0.3 floor-area-ratio (FAR) for a total of 300,564 square feet. The land uses north of Dublin Boulevard would remain the same as the project. As shown in **Table 19-3: Alternative 3 Land Use Summary & Comparison**, this alternative would result in a reduction of 35,564 sf. of commercial land use.

Table 19-3: Alternative 3 Land Use Summary & Comparison

Land Use Designations	Gross Acres	Res. Units	Du/Acre	Floor Area Ratio	Commercial sq. ft.
General Commercial	29.4	40	--	.30	300,564
Medium Density Residential	17	150	8.8	--	
Medium-High Density Residential	21.1	360	17.1	--	--
Public/Semi-Public	3.8	100	26.3	--	--
Parks/Public Recreation	2.5	--	--	--	--
Total	--	650	--	--	300,564
Proposed Project	73.8	650	--	--	265,000
Difference	--	0	--	--	(35,564)

19.6.3 Impact Analysis

Because the entirety of the project site is assumed to be disturbed, impacts to Cultural & Tribal Resources, Geology & Soils, Hazards & Hazardous Materials, Hydrology & Water Quality, and construction related Air Quality/GHG Emissions and Noise would be similar to the project. Also, because the types of land uses would be similar and subject to the site and architectural design review, impacts to aesthetics would also be similar.

Impacts to Public Services, Utilities, & Service Systems and Energy, would generally be similar as this alternative would be developing urban uses, similar to that proposed; with both needing infrastructure to service the project site, as well as police, fire, and emergency services.

Because there would be no change in the number of residential units on the project site, impacts to population and housing would be similar to the project.

As shown in **Table 19-4: Trip Generation for Alternative 3**, Alternative 3 would generate considerably less trips as compared to the project.

Table 19-4: Alternative 3 Trip Generation Comparison

Scenario	Trip Generation			
	Daily	AM Peak Hour	PM Peak Hour	Saturday Peak Hour
Alternative 3 – Commercial	12,765	764	1,027	909
Proposed Project	19,327	748	1,545	1,928
Difference	-6,562	+16	-518	-1,019

Source: Kimley-Horn & Associates, 2022.

Because Alternative 3 would result in fewer traffic trips, operational impacts to air quality would be less, but would remain significant and unavoidable. The reduced number of traffic trips would correspond to less operational noise impacts as well.

19.7 Environmentally Superior Alternative

The qualitative environmental effect of each alternative in relation to the project are summarized in [Table 19-5: Comparison of Alternatives](#).

Table 19-5: Comparison of Alternatives

Topic	Alternative 1 No Project	Alternative 2 Existing General Plan and Eastern Dublin Specific Plan	Alternative 3 Commercial Development Task Force Land Plan
Aesthetics	Less impact	Similar impact	Similar impact
Air Quality	Less impact	Similar Impact	Less impact
Biological Resources	Less impact	Similar impact	Similar impact
Cultural & Tribal Cultural Resources	Less impact	Similar impact	Similar impact
Geology & Soils	Less impact	Similar impact	Similar impact
Greenhouse Gas Emissions	Less impact	Greater impact	Less impact
Hazards & Hazardous Materials	Less impact	Similar impact	Similar impact
Hydrology & Water Quality	Less impact	Similar impact	Similar impact
Land Use & Planning	Less impact	Similar impact	Similar impact
Noise & Vibration	Less impact	Similar Impact	Less impact
Population & Housing	Less impact	Similar impact	Similar impact
Public Services, Utilities & Service Systems	Less impact	Similar impact	Similar impact

Topic	Alternative 1 No Project	Alternative 2 Existing General Plan and Eastern Dublin Specific Plan	Alternative 3 Commercial Development Task Force Land Plan
Transportation	Less impact	Less impact	Less impact
Energy	Less impact	Similar Impact	Similar impact

CEQA Guidelines Section 15126(e)(2) requires an EIR to identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

In this case, the No Project Alternative has less impact on all topical subjects. Therefore, of the three remaining alternatives, Alternative 3 – Commercial Development Task Force Land Plan would be environmentally superior because it would not result in less impacts to Air Quality, Greenhouse Gas Emissions, Noise, and Transportation. This would result in the greatest reductions in the severity of the significant unavoidable transportation impacts, and a corresponding reduction in air quality and noise impacts. Therefore, Alternative 3 – Commercial Development Task Force Land Plan is the Environmentally Superior Alternative.

19.8 References

City of Dublin, *Eastern Dublin Specific Plan* 1985; updated 2022.

City of Dublin, *General Plan*, 1985 amended 2022.

City of Dublin Commercial Development Task Force, *Final Summary of Key Recommendations Report*, 2014

20 Other CEQA Considerations

20.1 Growth-Inducing Effects

Section 15126.2(d) of the State CEQA Guidelines provides the following guidance on growth-inducing impacts: a project is identified as growth inducing if it “could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.”

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement would result if a project involves construction of new housing. A project can have indirect growth-inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a substantial construction effort, which would relate to labor requirements for construction, with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. However, as the project site is located within the City of Dublin, this growth has been planned as anticipated in the City’s General Plan.

Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Increases in population could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also require analysis of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The project’s 650 residential units would directly result in a population increase of 1,944 persons, based on the General Plan Public Review Draft Housing Element average of 2.99 persons per household. This population increase would not represent a substantial increase in housing and/or residents. Furthermore, this amount of growth would be within existing growth projections for the City. Equally, the increase in population would not represent a substantial indirect growth inducement factor. Residential development on the project site would not propose new infrastructure that would induce substantial growth in the project site vicinity that was not previously considered for development. Residential development on the project site, like other development in the project site vicinity, would connect to existing utilities and occur within an urbanized area adequately served by transportation systems and infrastructure.

The project would develop up to 265,000 sf. of new commercial uses. Using a standard employment estimate of one job per 500 sf., the project would employ an estimated 530 workers. This number of jobs is not large enough to induce significant population growth in the area. In addition, the California Employment Development Department indicates that the Alameda County labor force totaled 827,700 persons as of February 2022. Of this figure, 31,300 persons were unemployed. This indicates that there is a large enough pool of labor in Alameda

County to fill the project's employment opportunities such that it would be unlikely that substantial numbers of people would relocate to the East Bay. Similarly, short-term construction jobs would likely be filled by existing residents of the City of Dublin and the region.

Based on the foregoing analysis, growth-inducing impacts would be less than significant.

20.2 Significant Irreversible Commitment of Resources

Section 15126.2(c) of the State CEQA Guidelines states that irreversible commitments of resources should be evaluated to assure that such consumption is justified. Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely, and certain types of impacts may commit future generations to similar uses.

Changes that Commit Future Generations to Similar Uses

The project would change the current land use designation and zoning of the project site and commit future generations to similar land uses. Depending on market demand, the commercial uses could change or be replaced in the future. However, residential development, once constructed, is rarely replaced by new uses within the first few generations after construction.

Use of Nonrenewable Resources

Construction of the project would consume natural resources (gasoline, sand and gravel, asphalt, oil, etc.) during construction activities. During operation of both the commercial and the residential uses, energy would be consumed for lighting, heating/cooling, and transportation. Neither the construction nor operation would consume nonrenewable resources in amounts substantially different from or greater than typical urban development or similar land uses. The project would not affect agricultural resources or mineral resources or access to such resources. Therefore, the project would not involve a large commitment of nonrenewable resources.

Irreversible Damage from Environmental Accidents

The project may include storage of hazardous materials, such as cleaning products and other products, which would not be regarded as sufficient to create a significant hazard to the public. All hazardous materials would be subject to existing storage, handling, and disposal regulations that limit the potential exposure to workers and the public.

20.3 Significant Unavoidable Impacts

The project would result in the following significant unavoidable impacts:

- **Air Quality.** The project would cause construction impacts associated with the release of nitrogen oxides (NOx) that would exceed BAAQMD significance thresholds. Despite implementation of **MM AQ-2.2: Off-Road Diesel-Powered Construction Equipment**, construction-related NOx emissions would remain significant and unavoidable. The project would also cause operational impacts associated with the release of reactive

organic gases (ROG) and NO_x that would exceed BAAQMD significance thresholds. Despite implementation of **MM AQ-2.4: Wood Burning Fireplaces**, operational emissions from ROG and NO_x would remain significant and unavoidable. These impacts would occur through cumulative conditions.

- **Transportation.** Using either VMT scenario as described in **Section 17.5.3**, regional Retail/Recreation, including the proposed Topgolf, would result in a net increase in VMT to the planning area. Per City significance criteria, any net increase in VMT to the planning area would constitute a significant impact. Despite implementation of **MM AQ-2.5: Vehicle Trip Reduction** which requires the development of a qualifying Commute Trip Reduction (CTR)/ Transportation Demand Management (TDM) plan to reduce mobile GHG emissions as well as VMT for all uses (including the Topgolf development), VMT impacts would remain significant and unavoidable.

The EDSP EIR also included the impacts identified above as significant and unavoidable as follows:

- **Air Quality.** Project development as a result of dust deposition, construction equipment emissions, mobile source emissions of ROG and NO_x, and stationary source emissions. (Impacts 3.11/A, B, C, E)
- **Traffic and Circulation.** I-580 (Impact 3.3/B, E), intersection of Santa Rita Road and I-580 EB Ramps (Impact 3.3/I), and the intersections of Dublin Boulevard and Hacienda Drive and Dublin Boulevard and Tassajara Road (Impact 3.3/M)

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