DUBLIN
CALIFORNIA

Hexcel Redevelopment Project

Focused EIR

August 21, 2023
PROJECT APPLICATION 000688

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Acronyms

1,1,1-TCA	1,1,1-trichloroethane
AB	Assembly Bill
ACDEH	Alameda County Department of Environmental Health
ACMs	asbestos-containing materials
A.D.	Anno Domini
ADA	American With Disabilities
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
APE	Area of Potential Effects
APN	Assessor Parcel Numbers
Ardent	Ardent Environmental Group
B.C.	before present
BAAQMD	Bay Area Air Quality Management District
bgs	below the ground surface
BL1	Green Buildings
BL2	Decarbonize Buildings
BMPs	Best Management Practices
Business Plans	Hazardous Materials Release Response Plans and Inventories
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
cal B.C.	calibrated years before the present
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAP 2030	Climate Action Plan 2030
CARB	California Air Resources Board
CBC	California Building Standards Code
CCR	California Code of Regulations
CCTS	Central California Taxonomic System
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
City	City of Dublin
CNDDB	California Natural Diversity Data Base
CO	carbon monoxide

CO_2	carbon dioxide
Cornerstone	Cornerstone Earth Group
county	County of Alameda
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CY	cubic yard
DOC	California Department of Conservation
DPR	Department of Parks and Recreation
DTSC	California Department of Toxic Substances Control
EBCE	East Bay Community Energy
EDR	Environmental Database Report
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
ESA	Federal Endangered Species Act of 1973
EV	electric vehicle
GGEs	gasoline gallon equivalents of petroleum
GHG	greenhouse gas
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscapes Survey
Hexcel	Hexcel Products, Inc.
Hi Bay	laboratories were used for small-scale testing, while the building located south of the offices/laboratories
HRI	Historic Resources Inventory
I-	Interstate
IPaC	Information for Planning and Consulting
IS	Initial Study
LED	light emitting diode
light industrial	zoned M-1
MBTA	Migratory Bird Treaty Act
MLD	most likely descendant
MLT	Middle-to-Late Transition
MMRP	Mitigation Monitoring and Reporting Plan
MND	Mitigated Negative Declaration
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASA	National Aeronautics and Space Administration
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NHSTA	National Highway Traffic Safety Administration

NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPS	National Parks Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OES	Office of Emergency Services
PD	Planned Development
PG&E	Pacific Gas & Electric Company
PM	particulate matter
PM_{10}	PM equal to or less than 10 micrometers in diameter
$PM_{2.5}$	PM equal to or less than 2.5 micrometers in diameter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code
proposed project	The proposed actions that would involve replacing existing building with a new building and other site improvements
R&D	research and development
ROGs	reactive organic gases
Royal Research	Royal Research Corporation
RWQCB	Regional Water Quality Control Board
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SO_2	sulfur dioxide
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
TACs	toxic air contaminants
TCE	trichloroethene
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
VOCs	volatile organic compounds
WSA	William Self Associates, Inc.

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Hexcel Redevelopment Project
Environmental Impact Report

Project Summary

Project Description

Dublin Boulevard Owner, LP is proposing to construct a new 125,304 square foot building on the 8.81-acre project site located at 11711 Dublin Boulevard in the City of Dublin, Alameda County, California. The project site is composed of two parcels (Assessor Parcel Numbers [APN] 941-1560-009-01 [Parcel 1] and 941-1560-003-04 [Parcel 2]) with an existing 62,715 square foot building on Parcel 1. The existing Hexcel research and development (R&D) building would be demolished and replaced with the proposed building. The proposed building would cater to future tenants in the R&D and life sciences field. Other site improvements would include landscaping; parking; a fire access road; circulation improvements for truck access and loading and unloading materials; utilities; pavement and grading to treat site drainage.

Alternatives

- No Project Alternative (existing conditions, no change)
- Alternative 1: Reduced Grading Alternative

The alternatives discussion of this Environmental Impact Report (EIR) was prepared in accordance with Section 15126(d) of the California Environmental Quality Act (CEQA) Guidelines and focuses on alternatives that are capable of eliminating or reducing significant adverse effects associated with the proposed project while feasibly attaining most of the basic objectives.

This EIR identifies the No Project Alternative as the “environmentally superior” alternative, because it would eliminate the significant and unavoidable impacts to the Project site’s historic resource, and would also eliminate less than significant (or less than significant with mitigation) impacts on other resource topics. While the No Project Alternative would eliminate the significant adverse effect of the proposed Project, it would not achieve the Project objectives.

When the No Project Alternative is the environmentally superior alternative, CEQA requires that an additional alternative be identified. In this case, Alternative 1 (Reduced Grading) would be the environmentally superior alternative, because it would accomplish most of the Project’s objectives while reducing potential impacts to buried archeological and paleontological resources as described in the Alternatives section.

Issues of Concern

The main issue of concern regarding the proposed Project is the demolition of the site’s historic resource, which is the existing building. This issue is fully addressed in the Environmental Analysis of this EIR. Table 1: Summary of Impacts and Mitigation below summarizes potentially significant environmental impacts of the proposed project. The table includes a list of impacts and mitigation measures identified in this EIR. The table lists impacts and mitigation measures in two major

categories: significant impacts that would remain significant even with mitigation (significant and unavoidable), and potentially significant impacts that could be mitigated to a less than significant level. Mitigation measures descriptions provided in Table 1 are abbreviated; for the complete description of these mitigation measures, please refer to their associated sections in this EIR. Refer to the Initial Study in Appendix A for further discussion of impacts that would have no impact or be less than significant without mitigation.

Table 1: Summary of Impacts and Mitigation

Impact	Mitigation	Level of Significance After Mitigation
Impact AQ-1: The proposed Project could be inconsistent with BAAQMD's Basic Construction Mitigation during demolition and construction.	**Mitigation Measure AQ-1. Implement Basic Construction Emission Control Practices:** The construction contractor shall comply with the following BAAQMD Basic Construction Measures, as applicable, for reducing construction emissions of uncontrolled fugitive dust (PM_{10} and $PM_{2.5}$). See Section 1 for complete description.	Less Than Significant with Mitigation
Impact AQ -2: The proposed Project could result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard during construction and operation.	See Mitigation Measure AQ-1 in Impact AQ-1 above. See Section 1 for complete description.	Less Than Significant with Mitigation
Impact BIO-1: The proposed Project could result in nest destruction and failure to nesting birds during construction activities.	**Mitigation Measure BIO-1. Nesting Bird Avoidance Measures:** To the extent practicable, construction activities and any tree trimming/removal shall be performed from September 16 through February 15 to avoid the general nesting period for birds. If construction or tree trimming/removal cannot be performed during this period, nesting bird surveys and active nest buffers. If the qualified biologist documents active nests within the survey area, an appropriate buffer between the nest and active construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. See Section 2 for complete description.	Less Than Significant with Mitigation
Impact BIO-2: The proposed Project could result in mortality to bats during construction activities.	**Mitigation Measure BIO-2. Roosting Bat Surveys and Avoidance:** The Project Applicant shall retain a qualified biologist to conduct a bat habitat assessment in all project areas that require tree removal. The qualified biologist shall identify and document the location of potentially suitable bat roosting habitat prior to construction activities. If no suitable bat habitat is observed, the biologist shall inform the Project Applicant, and no further considerations are required. If bat roosting habitat is observed, the location of such habitat areas shall be provided to the Project Applicant. See Section 3 for the complete description.	Less Than Significant with Mitigation
Impact CR-1: The proposed Project would result in the demolition of the existing Hexcel Corporation R&D facility, which is a historical resource for the purposes of CEQA.	**Mitigation Measure CUL-1: HABS Recordation:** The Project applicant shall document the Hexcel Corporation R&D facility prior to demolition. See Section 3 for the complete description. **Mitigation Measure CUL-2: Interpretive Displays:** The Project applicant shall install permanent interpretive displays for public exhibition detailing the history and significance of the Hexcel Corporation R&D facility at the Project site. See Section 3 for the complete description.	Significant and Unavoidable

Impact	Mitigation	Level of Significance After Mitigation
Impact CR-2: The proposed Project could cause substantial adverse change in the significance of an archaeological resources during excavation activities.	**Mitigation Measure CUL-3: Archaeological and Tribal Monitoring:** A qualified archaeologist shall be retained by the applicant prior to implementing construction. See Section 3 for the complete description. **Mitigation Measure CUL-4: Inadvertent Discovery Protocols:** a number of protocols would be followed in the case of the discovery of archeological and tribal resources. See Section 3 for the complete description.	Less Than Significant with Mitigation
Impact EN-1: The proposed Project could consume energy in a wasteful or inefficient way.	See Mitigation Measure AQ-1 in Impact AQ-1 above.	Less Than Significant with Mitigation
Impact GEO-1: The proposed Project could accidentally cause damage to, or destruction of unique paleontological resources during earthmoving activities.	**Mitigation Measure GEO-1. Avoid Impacts to Unique Paleontological Resources:** To minimize the potential for destruction of or damage to previously unknown unique, scientifically important paleontological resources during earthmoving activities at the Project site, the Project applicant shall do the following: Prior to the start of earthmoving activities, retain either a qualified archaeologist or paleontologist to inform all construction personnel. If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work within 50 feet of the find and notify the Project applicant and the City. See Section 5 for the complete description.	Less Than Significant with Mitigation
Impact HAZMat-1: The proposed Project could expose people to contaminated soil or groundwater that exceed regulatory thresholds.	**Mitigation Measure HAZMAT-1. Perform a Phase II Environmental Site Assessment:** Prior to the start of earthmoving activities at the Project site, the Project applicant shall retain the services of a qualified remediation firm to perform a Phase II Environmental Site Assessment (ESA). If the results of laboratory analyses from the Phase II ESA demonstrate that constituents of concern are present at levels that exceed regulatory agency threshold levels, the Project applicant shall consult with ACDEH (and other regulatory agencies such as the SWRCB if necessary) regarding the necessary actions for remediation. See Section 6 for complete description.	Less Than Significant with Mitigation
Impact TR-1: The Project could disturb Native American human remains during excavation activities.	**Mitigation Measure TR-1: Inadvertent/Unanticipated Tribal Cultural Resources Discovery Protocols:** a number of protocols would be followed in the case of the discovery of tribal resources. See Mitigation Measures CUL-3 and CUL-4 in Impact CR-2 above.	Less Than Significant with Mitigation

Notes:
ACDEH = Alameda County Department of Environmental Health, BAAQMD = Bay Area Air Quality Management District, City = City of Dublin, ESA = Environmental Site Assessment, PM_{10} = PM equal to or less than 10 micrometers in diameter, $PM_{2.5}$ = PM equal to or less than 2.5 micrometers in diameter, Project = The proposed actions that would involve replacing existing building with a new building and other site improvements, Project Applicant = Dublin Boulevard Owner, LP, Project site = 11711 Dublin Boulevard in the City of Dublin, Alameda County, California, SWRCB = California State Water Resources Control Board

Environmental Review Process

The City of Dublin (the City) is the lead agency responsible for administrating the environmental review under CEQA. After preparing an Initial Study, the City has determined that an EIR must be prepared to evaluate potentially significant effects that could result from implementation of the proposed Project. A Notice of Preparation was prepared and a scoping period held from May 15, 2023 to Jun 15, 2023. The full CEQA Guidelines Appendix G checklist is provided in the Initial Study (see **Appendix A**).

CEQA requires that, before a project with potentially significant environmental effects may be approved, an EIR must be prepared that fully describes the environmental effects of the project, identifies mitigation measures to lessen or eliminate adverse impacts, and examines feasible alternatives to the project. The information contained in the EIR is to be reviewed and considered by the lead agency prior to the ultimate decision to approve, disapprove, or modify the proposed project.

Consistent with CEQA guidelines sections 15080 through 15097, the CEQA process has multiple phases, many of which require notification to the public and opportunity for public comments. The environmental review process for a focused EIR includes the following steps: publication of a notice of preparation (NOP) of an EIR and public scoping; publication of a Draft EIR for public review and comment; preparation and publication of responses to public and agency comments on the draft EIR; and certification of the final EIR. The EIR process provides an opportunity for the public to review and comment on the proposed Project's potential environmental effects and to further inform the environmental analysis. These steps are described in more detail in the following sections.

Notice of Preparation of an Environmental Impact Report and Scoping Period

An initial study is an analysis conducted by a lead agency to determine whether a project may have a significant effect on the environment and aids in determining what type of environmental document the lead agency is required to prepare. An initial study was prepared for the proposed Project (see **Appendix A**). It analyzed the environmental topics included in CEQA Guidelines Appendix G checklist to determine which topics would be less than significant. This EIR further evaluates environmental topics which would have significant impacts that could be mitigated to less-than-significant levels and other topics that would have significant and unavoidable impacts.

Consistent with the requirements of CEQA guidelines sections 15063 and 15082, the City has made a good-faith effort during the preparation of the Draft EIR to contact all responsible and trustee agencies; organizations and persons who may have an interest in the proposed Project; and all applicable government agencies, including the Governor's Office of Planning and Research, State Clearinghouse. This outreach effort included the circulation of a NOP on May 15, 2023, which began a 30-day comment period that ended on June 15, 2023. The NOP requested that agencies and interested parties comment on environmental issues that should be addressed in the Draft EIR. A copy of the NOP is provided in **Appendix B**.

The City sent out NOP and scoping period notices as follows:

1. Sent NOP via certified mail to the County clerk and public agencies on May 15, 2023.
2. Sent email blast to contacts on the City's universal mailing list on May 15, 2023.
3. Copy of NOP and noticing posted at Dublin Library and at the City Hall
4. Publication of NOP in the East Bay Times on May 17, 2023
5. Posting the NOP and noticing to the City website at https://dublin-development.icitywork.com/

The City held a virtual public scoping meeting on May 25, 2023, at 7:00 pm, with options for joining by phone or computer. The purpose of the scoping meeting was to inform the public about the proposed Project, explain the environmental review process, and provide an opportunity for the public to make

comments and express concerns related to the Project's environmental issues. No one called into the meeting and the meeting ended at 7:15 pm. Two comment letters were received during the public scoping period: one from the Native American Heritage Commission and one from the City of Pleasanton. Copies of these letters are contained in **Appendix B**.

Draft EIR and Public Review Period

This Draft EIR is available for a 45-day public review period as indicated on the Public Notice of Availability of this document, which ends on **October 5, 2023**. The purpose of public review of the EIR is to receive comments on the adequacy of the document in addressing adverse physical effects of the Project. This Draft EIR is being circulated to relevant local, regional and/or state agencies, and to interested organizations and individuals who may wish to review and comment on the report.

During the public review period, written comments on the adequacy of the Draft EIR may be submitted to the City of Dublin at the following address:

Gaspare Annibale, Associate Planner & Anne Hersch, Assistant Community Development Director
City of Dublin
Community Development Department
100 Civic Plaza
Dublin, CA 94568

Written comments may also be submitted via email to Gaspare.Annibale@dublin.ca.gov and Anne.Hersch@dublin.ca.gov with "Hexcel Redevelopment Project Draft EIR" noted in the subject line.

Final EIR and Responses to Comment

Responses to all substantive comments received on the adequacy of the Draft EIR and submitted within the specified review period will be prepared and included in the Responses to Comments/Final EIR, including any revisions to the EIR required in response to the comments. If the City decides to approve the Project, the City must first certify the Final EIR and adopt a Mitigation Monitoring and Reporting Program for mitigation measures identified in the EIR, in accordance with the requirements of California Public Resources Code (PRC) Section 21001.

Mitigation Monitoring and Reporting Program

At the time of Project approval, CEQA and the CEQA guidelines require agencies to adopt a mitigation monitoring and reporting program and to make that program a condition of project approval, to mitigate or avoid significant impacts on the environment (CEQA section 21081.6; CEQA guidelines section 15097). Mitigation measures that have been recommended in this EIR to reduce the environmental impacts of the proposed Project in relation to the above topics will be included in the Mitigation Monitoring and Reporting Plan (MMRP) that the City of Dublin will prepare and adopt (pursuant to the CEQA Guidelines Section 15097) if the City determines that the proposed Project or one of the proposed alternatives should be approved.

Scope of EIR

Topics Addressed in this EIR

Pursuant to section 15143 of the state CEQA guidelines, a lead agency may focus an EIR's discussion on specific issue areas where significant impacts on the environment may occur: "[e]ffects dismissed in an Initial Study as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the Lead Agency subsequently receives information inconsistent with the finding in the Initial Study. A copy of the Initial Study may be attached to the EIR to provide the basis for limiting the impacts discussed." The initial study for the proposed Project is included in **Appendix A** of this Draft EIR.

Pursuant to CEQA guidelines section 15063(c)(3), and based on its review of existing information and the initial study completed for the proposed Project, the City determined that the proposed Project would have significant or potentially significant impacts in the following resource areas that require further analysis and are therefore discussed in this Draft EIR:

- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Tribal Cultural Resources

Topics Not Addressed in Detail in this EIR Based on Preparation of the Initial Study

The information and analysis presented in the Initial Study provides substantial evidence for the conclusion, for all the issues listed below (i.e., those not addressed in detail in this EIR), that: 1) CEQA standards triggering preparation of further environmental review do not exist for those issues; and 2) impacts under these topics would have no impact or be less than significant. Topics not addressed in this EIR in detail are listed below by impact determination category identified in Appendix G, the Environmental Checklist Form. These topics are, however, analyzed for full disclosure of the environmental determination, in the Initial Study, included within **Appendix A** of this EIR. In addition to the list below, impacts from the CEQA checklist that have a less than significant impact related to air quality, biological resources, energy, geology and soils, and hazards and hazardous materials are also included in the Initial Study.

- Aesthetics
- Agricultural and Forestry Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Transportation
- Utilities and Service Systems
- Wildfire

Project Description

Project Site and Vicinity

The Project site is located at 11711 Dublin Boulevard in the City of Dublin, Alameda County, California. See Figure 1. Project Location. The site includes two parcels totaling 8.81 acres; APN 941-1560-009-01 [Parcel 1] is the larger parcel at 8.30 acres and is located adjacent to Dublin Boulevard, and [APN] 941-1560-003-04 [Parcel 2] is the smaller parcel at 0.51 acre and is located toward the back (south) of the Project site adjacent to I-580. The site slopes from a maximum elevation of approximately 395 feet above mean sea level near the southwest corner to about 382 feet at the northern corner. Parcel 1 is zoned M-1 (light industrial) and Planned Development (PD) (Ordinance No. 80-60) and Parcel 2 is zoned M-1 (light industrial).

The site is also located in the Dublin Village Historic Area Specific Plan boundary. The Specific Plan intends to protect and preserve historical resources and further enhance this area with development that is compatible with the extant historic buildings and remnants in the area. The original historic buildings in this area include St. Raymond's church, the Murray Schoolhouse, Pioneer Cemetery, Green's Store, and two bungalow homes. These resources function together as the Dublin Heritage Center, a local history museum and cultural center. The Specific Plan boundary extends from Cronin Circle to Interstate (I-)580 and San Ramon Road to Hansen Drive, including portions west of Hansen Drive along Dublin Boulevard. The Dublin Village Historic Area encompasses approximately 40 acres (City of Dublin 2014).

Parcel 1 (the northern and main portion of the site) is developed with a 62,715 square foot building, at-grade parking, underground and aboveground utilities, pavement, and ornamental landscaping. The existing building is being used as a R&D facility. The landscape consists of grass areas and mature trees.

Parcel 2 (the southern parcel) is undeveloped and is surrounded by dense riparian vegetation including mature trees. The Dublin Creek runs along the approximate southern boundary and is approximately 13 to 18 feet below the adjacent site elevations.

Project Objectives

The proposed Project has the following objectives:

1. To redevelop the Hexcel site with a new and upgraded facility that appeals to the life sciences and manufacturing field.
2. To rezone Parcels 1 and 2 as a Planned Development, which provide development standards beyond those of the M-1 zoning, and adopt a new ordinance.

Surrounding Land Uses

As shown in Figure 2. Project Site, the Project site is immediately surrounded by commercial office uses including an R&D facility, medical and professional offices to the west, US Bank, Dublin Pioneer Cemetery, and the Dublin Heritage Park and Museums to the east; I-580 to the south; and Dublin Boulevard to the north. To the north of Dublin Boulevard and to the east of the Dublin Heritage Park

and Museums and cemetery are single-family houses. Approximately a mile to the west is Dublin Hills Regional Open Space Preserve.

Project Characteristics

The proposed Project would result in the existing 62,715 square foot industrial building being demolished and a new 125,304 square foot building being developed on the 8.81-acre Project site. The new building would cater to future tenants in the R&D and life sciences field. Other site improvements would include landscaping; parking; a fire access road; circulation improvements for truck access and loading and unloading materials; utilities; pavement and grading to treat site drainage. Figure 3. Site Plan shows the proposed site layout. The following sections describe the proposed Project and project components.

Proposed Building

The proposed building would cover approximately 33 percent of Parcel 1 (see Figure 3. Site Plan). The building would be set back approximately 135 feet from Dublin Boulevard, separated by landscaped areas, parking stalls and a fire access route for aerial apparatus access (described in succeeding sections). As shown in Figure 4. Elevations, the building would be a single-story building with the potential addition of a second floor mezzanine office and would have a maximum height of 40 feet. The outside of the building would be made of concrete tilt-up panels painted in various colors including blue, white and gray. The north side (front) of the building would have separate entrances to the lower level of each of the four separate tenant spaces (i.e., Units A, B, C and D). Access to the upper mezzanine office spaces would be provided from the interior of the building via stairways. The double doors to the entrance would have aluminum framing with insulated tempered glazed windows. Units B and C would also have doors on the front of the building that would provide access to the industrial and warehouse spaces. Large, glazed windows with aluminum framing would be installed on both lower and upper levels of the building to provide for maximum light filtering from the outside into the office spaces. The west and northwest side of the building would provide for six separate points of ingress/egress into the Unit A industrial and warehouse space, and from the inside provide access outside to adjacent parking stalls and a large landscaped area at the west corner of the site. The east side of the building would provide for four points of ingress/egress into Unit D and would have large vision glass that would allow light to flow into the space from outside while keeping the inside of the building cool and private. The south side (rear) of the building would have 4 to 5 dock doors per unit for loading and unloading of materials from the warehouses. There would be four drive-in doors for truck access inside the warehouse.

The interior design of the building would maximize natural light with mezzanine offices on the second floor overlooking the ground floor. The total square footage of the first floor would be 119,304 square feet and the second floor would be 6,000 square feet. As indicated in Table 2: Building Composition by Level, the space would be configured for different uses related to life sciences and advanced manufacturing. The overall building square footage could potentially be divided into four separate units (Units A, B, C and D), each with separate entrances, for four future tenants (see Figure 5. Overall Floor Plan). Each of the units would be between 26,000 to 34,000 square feet consisting of office, industrial, and warehouse space.

Table 2: Building Composition by Level

Level	Use	Square Footage
Level 1	Office	12,000
Level 1	Light industrial	30,000
Level 1	Warehouse	77,304
Level 2	Office	6,000

Other features of the building would include an interior bike rack, interior roof drain with pipe overflow, and an electrical room. All walking surfaces would be non-slip types. The floors would be a flat/tilt concrete slab and interior walls would be concrete. The building would be designed in compliance with fire codes related to fire access, internal sprinkler systems, electrical systems and fire-retardant materials. Additionally, the building would comply with American With Disabilities (ADA) standards related to access, ramps, breakrooms and bathrooms.

Landscape Improvements

Most of the existing landscape would be replaced, as illustrated in Figure 6A. Landscape Plan, except within the southern portion of the site (Parcel 2) where existing vegetation within the riparian corridor of Dublin Creek and along the I-580 boundary would be retained. The total site landscape area would be 99,106 square feet, which includes new and existing landscape. A variety of evergreen shrubs, ornamental trees, grasses, and perennials would be planted around the perimeter of the site and at parking lot areas as listed in Figure 6B: Landscape Plan Details. A total of 85 trees would be added to the site along with other plant materials. Some of the proposed plants include sweet bay, strawberry tree, toyon, hopbush, coffeeberry, red yucca, agave, fort night lily, ceanothus and atlas fescue. Bark mulch would be placed in planters around shrubs.

Native and drought tolerant plants would be utilized to enhance biodiversity and conserve water. Large ornamental trees planned for parking lot areas would provide shade and minimize radiating heat. The landscape would be designed to provide buffers between the site and adjacent properties, and plants would be strategically placed to screen the site's aboveground utilities from public streets. Temporary and permanent irrigation systems would be installed to establish plants. A 3,827 square foot grass bio-swale surrounded by trees and shrubs is proposed in the west corner of the site. Additional bio-swales/bioretention planters are proposed in the northeast and southeast areas of the site. The total bioretention areas would be 9,819 square feet.

Parcel 1 of the Project site contains 87 trees, four of which are heritage trees. All trees within this parcel would be removed except for two of the heritage trees; one in the northeast corner along the project frontage and one in the southwest portion of the site. The heritage trees that would be removed in Parcel 1 include one in the northwest portion of the site and one near the center of the site. Parcel 2 of the Project site contains 109 trees within the Dublin Creek riparian corridor. All trees in Parcel 2 would be retained, 19 of which are heritage trees.

Access, Circulation and Parking

Vehicular access would be provided from two existing driveways off Dublin Boulevard, one near the center of the site frontage and the other at the eastern boundary. These driveways would be

connected by a 30 to 40-foot-wide fire access route around the perimeter of the proposed building (Figure 7. Fire Access Route). A total of six fire hydrants would be installed along this fire access road. The road would be designed to accommodate emergency response vehicles (i.e., fire trucks), delivery box trucks, and trash trucks. A 26-foot-wide fire access route along the northern side of the building would allow for aerial apparatus access.

A total of 217 parking spaces would be provided for the Project. The parking spaces would be located around the perimeter of the building and at the edges of the site, and would include stalls for compact vehicles, standard vehicles, electric vehicle (EV) charging stations, and accessible parking. Compact parking would account for 27 percent of the overall parking spaces, while EV parking would account for 45 percent of the overall parking spaces. Additionally, 12 long-term and 12 short-term bicycle stalls would be provided onsite. Offsite loading spaces would be provided in the back (south) of the proposed building adjacent to the dock doors and facing Highway 580. No truck parking or loading will be facing the street.

Utilities Systems

The Project site is currently served by existing utilities for water, sanitary sewer, electricity, and gas. As discussed in the Initial Study in Section 18: Utilities and Service Systems, Dublin San Ramon Services District provides water and wastewater services to the site, and East Bay Community Energy provides electricity and gas to the site, which is distributed by Pacific Gas and Electric Company. Sanitary sewer, sanitary sewer manholes, a water meter, and electrical lines and cables would be removed and replaced with new lines that would connect to existing offsite service lines. Additionally, an existing electrical cabinet, storm drain pipe, electrical transformer, and air conditioner unit are proposed for removal and would be replaced. Some of the existing stormwater lines will be left in place but abandoned. New utility lines would be buried below ground.

A fire service line would connect to a public water line, which would provide water to the fire hydrants located around the site. Irrigation lines would also connect to public water lines. Stormwater would be treated onsite via five bioretention treatment planter areas that would be implemented in the western corner, southeast corner and south and northeast portions of the site. The site would be graded to have water flow into these biorientation areas. Approximately 9,819 square feet of bioretention areas on the Project site would be used for stormwater control. The proposed Project would include catch basins and storm drains throughout the project site. Full trash capture devices would be installed in all storm drain catch basins.

Other Improvements

An approximately 6-foot-high retaining wall would be installed along the southern edge of the parking lot and bioretention area in the southwest portion of the site, and lower (approximately 1- to 2-feet-high) retaining walls would be constructed adjacent to the bioretention areas in the southeast and northeast portions of the site. Additional retaining walls would be constructed to create loading dock ramps along the southern façade of the building.

A trash enclosure is proposed immediately adjacent to the backside of the building to the west. The trash enclosure would be 10.5 feet tall and 25.75 feet wide. A metal screen would be installed on the top of the enclosure to prevent illegal dumping. Double doors to move dumpsters in and out of the

enclosure and an accessible gate would be provided in the front of the enclosure. The enclosure would store two 6-cubic yard (CY) dumpsters and one 2-CY bin for green waste.

A pathway would be constructed that would extend from the front of the proposed building to the side of the building providing access to doors along the building, parking spaces and the trash enclosure. A trash container for trash, recycle and compost would be installed near the front entrance of the proposed building.

Construction Activities and Schedule

A detailed construction schedule has not been determined at this phase; however, all construction of the Project is anticipated to occur over a 12-month period with some of the phases overlapping. Work would occur during weekdays from 7 am to 4 pm. The anticipated (preliminary) construction schedule is provided in Table 3: Anticipated Construction Schedule, which may be updated subject to market conditions, regulatory approvals, and other factors. The number of onsite workers would vary depending on the construction phase, but it is anticipated for a Project of this scope to range from 7 to 64 workers. Typical grading depths throughout the site would be less than 2 to 3 feet below ground level. The maximum depth of excavation would be between 12 to 20 feet below the existing ground level at the storm drain pump, which would be located in the southern portion of Parcel 1. In the parking lot near the southwest corner, grading would extend to approximately 4.5 feet below ground level.

Table 3: Anticipated Construction Schedule

Construction Phase	Schedule	Duration
Demolition	Late fall 2023 to winter 2024	3 months
Site preparation/grading	Early spring 2024	1 month
Trenching and foundation	Spring 2024	1 month
Exterior building construction	Late spring 2024 to fall 2024	6 months
Interior building construction	Late fall 2024	2 months
Paving/landscape	Late fall 2024 to early winter	2 months

Construction phases would include demolition, site preparation and grading, trenching and foundation work, exterior building construction, interior building construction, and outside paving/landscaping. A summary of each construction phase is described below.

Demolition – This stage would include the demolition of the existing facility, asphalt pavement (140,724 square feet), concrete curbs, landscape including trees and bushes, irrigation system, drainage system, sewer system, site lights, electrical boxes and other electrical equipment, gas and water meters, fence, shed and gate. Anticipated construction equipment to be used would include concrete saws, excavators, loaders, tractors, backhoes, and rubber-tired dozers.

Site preparation/grading – After the demolition phase, the site would be cleared of all demolition waste and earthmoving activities such as excavation, grading and leveling would take place to prepare the site for the proposed building and other site improvements. Utility line trenching would also occur

during this stage. Anticipated construction equipment to be used would include graders, rubber-tired dozers, tractors, loaders, and backhoes.

Trenching and foundation – This phase would consist of excavating and trenching for footings, laying down reinforcing bars (rebar) for retaining walls, drilling piers, preparing beams for foundation, and pouring the foundation slab. Anticipated construction equipment to be used would include tractors, loaders, backhoes, and excavators.

Exterior building construction – This phase would include construction of framing, roof, and siding and installation of exterior windows and doors. Anticipated construction equipment to be used would include cranes, forklifts, generator sets, welders and tractors, loaders, backhoes and excavators.

Interior building construction – This stage would involve the interior rough out and interior finishes of the building. Walls, flooring, stairs, ceiling, windows, doors, interior electrical and plumbing would be developed at this phase. Anticipated construction equipment to be used would include air compressors and aerial lift.

Paving and landscape – This stage would include laying down the pavement for the parking, driveways, fire access road, and walkway areas. This stage also includes installation of landscaping and irrigation around the site. Anticipated construction equipment to be used would include cement and mortar mixers, pavers, pavement equipment, rollers, tractors, loaders, and backhoes.

Project Approvals

The City of Dublin is the Lead Agency for the proposed Project under CEQA. The City would be responsible for considering the Project's impacts as part of the Project approval. The City would require the applicant to obtain the following approvals and permits: approval of a Planned Development Rezone with a related Stage 1 and Stage 2 Development Plan; Site Development Review Permit; Heritage Tree Removal Permit; and demolition, building, grading, and encroachment permits.

Other agencies whose approval may be required include:

- Bay Area Air Quality Management District (BAAQMD); and
- Regional Water Quality Control Board (RWQCB).

Environmental Analysis

Introduction

The Environmental Analysis chapter contains the analysis of the potential effects to environmental topics considered under CEQA from construction and operation of the proposed Project. This chapter describes the existing setting, relevant plans and policies that would minimize or avoid potential adverse environmental effects, the significance criteria used to determine environmental impacts, the approach to the analysis, and the potential impacts that could result from development of the property. This chapter also identifies mitigation measures necessary to reduce the potential impacts of the proposed Project.

Environmental Topics

This document is a Focused EIR in that it evaluates potential impacts on a limited number of environmental issue areas that the lead agency determined to be significant (CEQA Guidelines Section 15063(c)(3)). After preparation of the Initial Study Checklist (see Initial Study in Appendix A), the City of Dublin determined that the EIR would focus on the potentially significant impacts of the proposed Project including Cultural Resources and Tribal Resources and other impacts that could result in a less than significant impact with mitigation.

Impact Levels

The EIR uses the following terms to characterize environmental impacts of the proposed Project:

- No impact indicates that the construction, operation, and maintenance of the proposed Project would not have any direct or indirect effects on the physical environment. This designation means the proposed Project would not result in a change to existing conditions. This impact level does not need mitigation.
- A less-than-significant impact is one that would not result in a substantial or potentially substantial adverse change in the physical environment. This designation means that the Project would result in some degree of change to existing conditions, but that change would not be considered "significant," as explained in the next impact designation. This impact level does not require mitigation under CEQA.
- A significant impact is defined by California Public Resources Code Section 21068 as "a substantial, or potentially substantial, adverse change in the environment." Levels of significance can vary by project, based on the setting and the nature of the change in the existing physical condition. CEQA Guidelines Section 15382 defines a significant effect as a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." A designation of an impact as significant requires that feasible mitigation measures or alternatives to the proposed project must be identified, where necessary and applicable, to eliminate or reduce the magnitude of the significant impact.

- A potentially significant impact is one that, if it were to occur, would be considered a significant impact as described above; however, the occurrence of the impact cannot be immediately determined with certainty. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact. Therefore, under CEQA, feasible mitigation measures or alternatives to the proposed project must be provided, where necessary and applicable, to eliminate or reduce the magnitude of potentially significant impacts.
- A potentially significant and unavoidable impact or significant and unavoidable impact is one that would result in a potentially substantial or substantial adverse effect on the environment, and that could not be reduced to a less-than-significant level even with implementation of feasible mitigation. Under CEQA, a project with significant and unavoidable impacts could still be approved, but the lead agency would be required to: (i) conclude in findings that there are no feasible means of substantially lessening or avoiding the significant impact in accordance with CEQA Guidelines Section 15091(a)(3); and (ii) prepare a statement of overriding considerations, in accordance with State CEQA Guidelines Section 15093, explaining why the lead agency would proceed with a project, in spite of the potential for significant impacts.

Environmental Baseline

Pursuant to CEQA Guidelines Section 15125(a), this EIR measures the physical impacts of the proposed project against a "baseline" of physical environmental conditions at and in the vicinity of the Project site. The environmental "baseline" is the combined circumstances existing at the time the NOP of the EIR was published; unless otherwise specified, this is considered the "existing" condition for this EIR. For this Project, the baseline is May 15, 2023. The baseline also includes the policy and planning context for the proposed Project, such as the existing design review policies and procedures that currently govern proposed development.

Source(s)

City of Dublin Community Development Department. 2014 (updated). Dublin Village Historic Area Specific Plan. Adopted by the Dublin City Council on August 1, 2006, Resolution No. 149-06. Available online: https://www.dublin.ca.gov/DocumentCenter/View/7780/DVHASP-FULL-PDF-10714?bidId=. Accessed April 2023.

Section 1: Air Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?			X	

Environmental Setting

Air quality is defined by the concentration of pollutants in relation to their impact on human health and the environment. Concentrations of air pollutants are determined by the rate and location of pollutant emissions released by pollution sources, and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, and sunlight. Therefore, ambient air quality conditions within the local air basin are influenced by natural factors such as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

The proposed Project is located in the San Francisco Bay Area Air Basin (SFBAAB), which is comprised of complex terrain types, including coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. Along the County of Alameda's (the county) western coast, temperatures are moderated by the bay, which can act as a heat source during cold weather or cool the air by evaporation during warm weather. It is generally sunnier farther from the coast, although partly cloudy skies are common throughout the summer. Average summer temperatures are mild overnight and moderate during the day. Winter temperatures are typically cool overnight and mild during the day. Highest temperatures are more common inland. Wind speeds vary throughout the county, with the strongest gusts along the western coast, often aided by dominant westerly winds and a bay-breeze effect. Rainfall totals average about 14 to 23 inches per year, with the highest totals in the northern end of the county and atop the Oakland-Berkeley hills (BAAQMD 2021).

Air Pollutants of Concern

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) as being of concern both on a nationwide and statewide level: ozone; carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); lead; and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter (PM_{10}) and PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$). Because the air quality standards for these air pollutants are regulated using human health and environmentally based criteria, they are commonly referred to as "criteria air pollutants." Ozone is not emitted directly into the air but is formed through a series of reactions involving reactive organic gases (ROGs) and nitrogen oxides (NO_X) in the presence of sunlight. ROG and NO_X are referred to as "ozone precursors."

Toxic Air Contaminants

In addition to criteria air pollutants, EPA and CARB regulate hazardous air pollutants, also known as toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that can cause chronic (i.e., long-duration) and acute (i.e., severe but short-term) adverse effects on human health, including carcinogenic effects. TACs can be separated into carcinogens and noncarcinogens based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Noncarcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Sensitive Receptors

Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residences are examples of sensitive receptors. The nearest sensitive receptors include residences located across Dublin Boulevard, approximately 200 feet north of the Project site, a daycare located approximately 300 feet north of the Project site, and residences located approximately 570 feet east of the Project site.

Regulatory Framework

Federal Clean Air Act and National Ambient Air Quality Standards (NAAQS). Pursuant to the Clean Air Act, the EPA has established ambient air quality standards to protect public health and welfare with an adequate margin of safety. These federal standards, known as NAAQS, were developed for the six criteria pollutants described above. NAAQS represent safe levels of each pollutant to avoid specific adverse effects to human health and the environment. Two types of NAAQS have been established, primary and secondary standards. Primary standards set limits to protect public health, especially that of sensitive populations such as asthmatics,

children, and seniors. Secondary standards set limits to protect public welfare, including protections against decreased visibility and damage to animals, crops, and buildings.

The Clean Air Act was amended in 1977 to require each state to maintain a State Implementation Plan (SIP) for achieving compliance with the NAAQS. In 1990, the Clean Air Act was amended again to strengthen regulation of both stationary and mobile emission sources.

California Clean Air Act and California Ambient Air Quality Standards (CAAQS). In 1988, the state legislature adopted the California Clean Air Act, which established a statewide air pollution control program. The California Clean Air Act requires all air districts in the state to make progress towards meeting the CAAQS by the earliest practical date. The California Clean Air Act establishes increasingly stringent requirements over time. CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride.

The California Clean Air Act substantially adds to the authority and responsibilities of air districts. The California Clean Air Act designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures.

Bay Area Air Quality Management District (BAAQMD). BAAQMD is the agency responsible for protecting public health and welfare through the administration of federal and state air quality laws and policies in the SFBAAB. BAAQMD's tasks include air pollution monitoring, preparing air quality plans, and promulgating rules and regulations. BAAQMD rules and regulations relevant to the proposed Project include but are not limited to: Regulation 6 (Particulate Matter); Regulation 7 (Odorous Substances); Regulation 8, Rule 3 (Architectural Coatings); Regulation 11, Rule 2 (Asbestos Demolition, Renovation and Manufacturing). Additional rules and regulations may be applicable dependent upon the future specific tenants of the building.

BAAQMD also maintains multiple air quality monitoring stations that continually measure the ambient concentrations of major air pollutants throughout the SFBAAB. Under the California Clean Air Act, BAAQMD is required to develop an air quality attainment plan for nonattainment criteria pollutants within the air district. The 2017 Bay Area Clean Air Plan: Spare the Air and Cool the Climate was adopted on April 19, 2017, and provides a regional strategy to protect public health and protect the climate. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Clean Air Plan builds upon and enhances BAAQMD's efforts to reduce emissions of fine PM and TACs (BAAQMD 2017a).

Attainment of Federal and State Air Quality Standards

Areas are classified under the Federal Clean Air Act and California Clean Air Act as attainment, non-attainment, or maintenance (areas that were previously non-attainment but are currently attainment) for each criteria pollutant based on whether the federal and state air quality standards have been achieved. With respect to the NAAQS, the SFBAAB is designated as a

nonattainment area for ozone and $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants. With respect to the CAAQS, the SFBAAB is designated as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants (BAAQMD 2017b).

City of Dublin General Plan. The City of Dublin General Plan, adopted in 1985 and amended in 2022, includes an Environmental Resources Management: Conservation Element. The following policies related to air quality would be applicable to the proposed Project (City of Dublin 2022):

- Request that the Bay Area Air Quality Management District establish an air quality monitoring station in Dublin.
- 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 CEQA level.

Project Impacts and Mitigation Measures

(a) Consistent with air quality plans (Less Than Significant Impact with Mitigation Incorporated)

Air quality plans describe air pollution control strategies to be implemented by a city, county, or regional air district. The primary purpose of an air quality plan is to bring an area that does not attain NAAQS and CAAQS into compliance with those standards pursuant to the requirements of the Clean Air Act and California Clean Air Act. The most recent air quality plan is the BAAQMD 2017 Clean Air Plan (BAAQMD 2017a). The 2017 Clean Air Plan identifies potential control measures and strategies, including rules and regulations that could be implemented to reduce air pollutant emissions from industrial facilities, commercial processes, on- and off-road motor vehicles, and other sources. BAAQMD implements these strategies through rules and regulations, grant and incentive programs, public education and outreach, and partnerships with other agencies and stakeholders.

A project is determined to be consistent with the 2017 Clean Air Plan if it supports the goals of the Clean Air Plan, includes applicable control measures from the Clean Air Plan, and would not disrupt or hinder implementation of any control measures from the Clean Air Plan (BAAQMD 2017a). Consistency with the Clean Air Plan also is determined through evaluation of project-related air quality impacts and demonstration that project-related emissions would not increase the frequency or severity of existing violations or contribute to a new violation of the NAAQS or CAAQS. The BAAQMD CEQA Air Quality Guidelines include thresholds of significance that are applied to evaluate regional impacts of project-specific emissions of air pollutants and their impact on the BAAQMD's ability to reach attainment (BAAQMD 2017c). Emissions that are above these thresholds have not been accommodated in the air quality plans and would not be consistent with the air quality plans.

Demolition activities and construction of the proposed Project would involve the use of off-road equipment, haul trucks, and worker commute trips that would generate short-term

criteria air pollutant emissions. Operation of the proposed Project would generate long-term emissions associated with daily employee vehicle trips, building energy consumption, reapplication of architectural coatings, use of consumer products, and maintenance/testing of the fire pump. As discussed in Impact (b) below, construction-related emissions of the proposed Project would not exceed the thresholds of significance recommended by BAAQMD. In addition, consistent with Stationary Source Control Measures SS36 (PM from Trackout) and SS38 (Fugitive Dust) of the 2017 Clean Air Plan, the proposed Project would implement BAAQMD's Basic Construction Mitigation Measures as noted in **Mitigation Measure AQ-1** and be subject to BAAQMD Rules and Regulations for controlling fugitive dust emissions (Regulation 6 [Particulate Matter]), which would reduce fugitive dust emissions during demolition and construction. Further, as discussed in Impact (b) below, the proposed Project would result in a net reduction of emissions compared to existing conditions for NOx, PM_{10}, and $PM_{2.5}$, and ROG emissions would not exceed the BAAQMD thresholds of significance. The proposed Project would also comply with Dublin Municipal Code, Chapter 7.94.100 (Green Building Code), which requires that new construction buildings are all-electric buildings. Compliance with the Green Building Code would also be consistent with building control measures included in the 2017 Clean Air Plan, such as BL2 (Decarbonize Buildings). Furthermore, the proposed Project electrical and plumbing fixtures would be Title 24 and California Green Building Standards Code (CALGreen) compliant, which would be consistent with Building Control Measure BL1 (Green Buildings). Therefore, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan and this impact would be **less than significant with mitigation**.

(b) Project emissions (Less than Significant with Mitigation Incorporated)

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development within the SFBAAB, and this regional impact is cumulative rather than being attributable to any one source. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

BAAQMD published the May 2017 CEQA Air Quality Guidelines, which provides lead agencies assistance in evaluating air quality impacts of projects and plans proposed in the SFBAAB (BAAQMD 2017c). 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. BAAQMD has stated that the CEQA Guidelines are for informational purposes only and should be followed by local governments at their own discretion (BAAQMD 2017c). The BAAQMD CEQA Guidelines may inform environmental review for development projects in the Bay Area, but do not commit local governments or BAAQMD to any specific course of regulatory action. The thresholds for criteria pollutants were developed through a quantitative examination of the efficacy of fugitive dust mitigation measures and a quantitative examination of statewide nonattainment emissions and are used for the analysis of project-generated emissions.

Construction emissions are short term but have the potential to result in a significant impact on air quality. Demolition and construction activities would generate temporary emissions of precursors to ozone (ROG and NO_X), CO, PM_{10}, and $PM_{2.5}$. ROG, NO_X, and CO emissions are associated primarily with mobile equipment exhaust, including off-road construction equipment and on-road motor vehicles. Fugitive particulate matter dust emissions are associated primarily with site preparation and travel on unpaved roads and vary as a function of parameters such as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles.

Demolition and construction activities are anticipated to begin in late fall 2023 and last approximately 12 months. Emissions associated with construction and operational activities were modeled using the California Emissions Estimator Model (CalEEMod) version 2020.4. CalEEMod allows the user to enter project-specific construction and operational information, such as types, number and horsepower of construction equipment, number and length of off-site motor vehicle trips, project square footage, daily vehicle trips, and anticipated energy consumption details. Demolition of the existing building is anticipated to require approximately 608 total loaded haul truck trips. Construction activities would require the use of concrete/industrial saws, excavators, rubber-tired dozers, graders, tractors/loaders/backhoes, cement and mortar mixers, pavers, paving equipment, rollers, air compressors, aerial lifts, cranes, welders, and generator sets. Approximately 6,800 cubic yards of material are anticipated to be excavated and re-used onsite. The proposed Project would also require removal of approximately 141,000 square feet of asphalt pavement, which would be reused onsite. Additional modeling assumptions and details are provided in **Appendix D**.

Operation of the proposed Project would generate criteria air pollutant emissions associated with mobile, area, and stationary sources. Mobile sources would include vehicle activity from employee commutes and miscellaneous truck deliveries associated with the proposed office, light industrial, and warehousing land uses. Area source emissions were based on CalEEMod default data and would be associated with landscaping equipment usage, consumer product usage (i.e., cleaning supplies, parking surface degreasers), and periodic reapplication of architectural coatings. Stationary sources of emissions would include maintenance and testing of the diesel-fired 175-horsepower fire pump. As described previously, the building would be all-electric (i.e., no natural gas); therefore, there would be no onsite energy-related emissions. Additional modeling assumptions and details are provided in **Appendix D**.

Table 4: Total and Average Daily Construction Emissions shows the total and average daily emissions associated with construction of the proposed Project.

Table 4: Total and Average Daily Construction Emissions

Source/Description	ROG	NO_X	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)
Total Construction Emissions (tons) [1]	0.90	1.96	0.08	0.07
Average Daily Emissions (lbs/day) [2]	6.92	14.98	0.60	0.57
Threshold of Significance (lbs/day) [3]	54	54	82	54
Exceeds Threshold?	No	No	No	No

Notes: lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than 10 micrometers in diameter; $PM_{2.5}$ = particulate matter less than 10 micrometers in diameter; ROG = reactive organic gases

[1] The construction emissions modeling assumed the proposed Project would include 227 parking spaces. Based on the latest site plan, the proposed Project would include 217 parking spaces. As such, the emissions presented above related asphalt paving and striping activities are conservative and actual emissions are anticipated to be slightly lower.

[2] Average daily emissions estimated assuming 261 construction workdays based on a 5-day construction workweek and 12 months of construction.

[3] BAAQMD 2017c

As shown in Table **4**, construction-related emissions of ROG, NOx, PM_{10} exhaust, and $PM_{2.5}$ exhaust would not exceed the applicable thresholds of significance established by BAAQMD. Therefore, the impacts from emission of these criteria air pollutants during construction would be less than significant.

BAAQMD does not have quantitative mass emissions thresholds for fugitive PM_{10} and $PM_{2.5}$ dust. Instead, BAAQMD recommends that all projects, regardless of the level of average daily emissions, implement applicable Best Management Practices (BMPs), including those listed as Basic Construction Measures in the BAAQMD CEQA Guidelines (BAAQMD 2017c). Without implementation of BAAQMD's Basic Construction Measures, the impact of fugitive dust emissions during Project construction would be potentially significant.

In order to comply with the BAAQMD threshold for fugitive dust emissions, the following mitigation measure is needed:

> **Mitigation Measure AQ-1. Implement Basic Construction Emission Control Practices.** The construction contractor shall comply with the following BAAQMD Basic Construction Measures, as applicable, for reducing construction emissions of uncontrolled fugitive dust (PM_{10} and $PM_{2.5}$):
>
> - 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 miles per hour (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 BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

With implementation of **Mitigation Measure AQ-1**, the proposed Project would be consistent with BAAQMD guidance and the generation of fugitive dust emissions from Project construction would be reduced to less than significant with mitigation.

As shown in Table **5**: Annual and Average Daily Operational Emissions, operation of the proposed Project would result in a net reduction in emissions of NO_X, PM_{10}, and $PM_{2.5}$ compared to existing conditions, and emissions of ROG would not exceed the BAAQMD thresholds of significance. Therefore, the impact of operational emissions would be less than significant.

Table 5: Annual and Average Daily Operational Emissions

Source/Description	ROG	NOx	PM_{10}	$PM_{2.5}$
Proposed Project Annual Emissions (tons/year) [1]	0.68	0.26	0.54	0.15
Existing Conditions Annual Emissions (tons/year)	0.61	0.47	0.65	0.18
Net Emissions (tons/year)	0.08	(0.22)	(0.12)	(0.04)
Threshold of Significance (tons/year) [2]	10	10	15	10
Exceeds Annual Threshold?	No	No	No	No
Average Daily Emissions (lbs/day)[3]	0.60	(1.69)	(0.90)	(0.27)
Threshold of Significance (lbs/day) [2]	54	54	82	54
Exceeds Average Daily Threshold?	No	No	No	No

Notes: lbs/day = pounds per day; NOx = nitrogen oxides; PM_{10} = particulate matter less than 10 micrometers in diameter; $PM_{2.5}$ = particulate matter less than 10 micrometers in diameter; ROG = reactive organic gases; tons/year = tons per year

[1] The operational emissions modeling assumed the proposed Project would include 18,000 square feet of office space, 36,500 square feet of light industrial space, and 70,804 square feet of warehousing space. Based on the latest site plan, the proposed Project would actually include 18,000 square feet of office space, 30,000 square feet of light industrial space, and 77,304 square feet of warehousing space. As light industrial land uses generate higher daily vehicle trips than warehousing land uses, daily vehicle trips and the associated mobile source emissions are anticipated to be lower (i.e., the emissions modeling assumed the proposed Project would generate 494 daily trips, based on the 2022 Transportation Impact Study (W-Trans 2022); however, under the revised site plan, the proposed Project is anticipated to generate 473 daily trips). As such, the emissions presented above are conservative and actual emissions are anticipated to be lower. Implementation of the proposed Project would result in a higher net reduction in emissions compared to existing conditions.

[2] BAAQMD 2017c

[3] Average daily emissions estimated 260 working days per year, based on a Monday through Friday operational schedule.

Therefore, with implementation of **Mitigation Measure AQ-1**, construction and operation of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard. This impact would be **less than significant with mitigation**.

(c) Expose sensitive receptors to pollutant concentrations (Less Than Significant Impact)

Impact c was determined to be a less than significant impact, as the Project would not increase air emissions from existing conditions. Therefore, the full analysis for this impact is discussed in the Initial Study provided in **Appendix A**.

(d) Odors (Less Than Significant)

Impact d was determined be a less than significant impact. Since the proposed Project involves the redevelopment of an existing industrial building with a new industrial building, the proposed Project would not introduce a new odor-generating source. Therefore, the full analysis for this impact is discussed in the Initial Study provided in **Appendix A**.

Source(s)

Bay Area Air Quality Management District (BAAQMD). 2017a. Final 2017 Clean Air Plan: Spare the Air: Cool the Climate. Available online: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed February 2023.

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____. 2021. In Your Community: Alameda County. Available online: https://www.baaqmd.gov/about-the-air-district/in-your-community/alameda-county. Accessed January 2021.

City of Dublin. 2022. General Plan. Available online: https://www.dublin.ca.gov/DocumentCenter/View/30287/General-Plan-Update-04192022-WEB. Accessed March 2023.

W Traffic Engineering Transportation Planning (W-Trans). 2022. Final Transportation Impact Study for the Hexcel Redevelopment Project. December.

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Section 2: Biological Resources

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
2.	**BIOLOGICAL RESOURCES. Would the project:**				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Environmental Setting

This section describes the existing biological setting within the Project site, which consists of two adjacent parcels, Parcel 1 and Parcel 2. The focus of the analysis was based on the areas potentially directly or indirectly affected by construction of the Project, referred to herein as the Project footprint. The Project footprint is exclusively in Parcel 1.

The City of Dublin is characterized by a diverse array of wildlife and plant species, with two discrete habitat types—the flatter urbanized portion of the City and the surrounding oak

woodland and California annual grassland. The Project site is located within the urbanized area, which exhibits plant and animal species typical of urbanized areas including a combination of native and introduced trees, grasses and shrubs used for landscaping purposes.

The proposed Project footprint is completely developed with buildings, hardscape, and landscaped areas. Vegetation within landscaped areas of the footprint is comprised of sod, various ornamental shrubs, various ornamental tree species, as well as native trees such as California Bay (*Umbellularia californica*), coast live oak trees (*Quercus agrifolia*), and California buckeye (*Aesculus californica*). No natural habitats (habitats with naturally occurring vegetation) occur within the Project footprint.

The Project site is primarily developed with buildings, hardscape, and landscaped areas associated with the existing Hexcel buildings; however, Dublin Creek is located to the south of the Project footprint approximately along the boundary of Parcel 1 and Parcel 2. Dublin Creek in this location contained less than 1 foot of water during AECOM's site visit on December 12, 2022. The banks of this feature are natural, but this feature runs underground for long stretches immediately east and west of the project.

Vegetation Communities

Vegetation communities within the Project footprint are limited to landscaped areas comprised of sod, various ornamental shrubs, various ornamental tree species, as well as a large number of native trees such as coast live oak trees, California Bay, and California buckeye. To the south of the Project footprint and on Parcel 2, is riparian habitat associated with Dublin Creek.

Wildlife

Wildlife in the Project site is likely to be limited to those species easily habituated to human activity, and which typically occupy urban areas or interfaces between urban and open space areas. Larger fauna may include raccoon (*Procyon lotor*) and skunk (*Mephitis mephitis*), while smaller fauna would include species such as western fence lizards (*Sceloporus occidentalis*), southern alligator lizard (*Elgaria multicarinata*), deer mice (*Peromyscus maniculatus*), and Botta's pocket gopher (*Thomomys bottae*).

A wide variety of bird species likely utilizes the riparian corridor of Dublin Creek to the south of the Project footprint, as well as the ornamental vegetation and trees within the Project footprint. These species include red-tailed hawk (*Buteo jamaicensis*), house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), bushtit (*Psaltriparus minimus*), western bluebird (*Sialia mexicana*), American robin (*Turdus migratorius*), Anna's hummingbird (*Calypte anna*), among others.

Regulatory Framework

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter any migratory bird, or the

parts, nests, or eggs of such bird, except under the terms of a valid federal permit. Migratory bird species protected by the act are listed in the Code of Federal Regulations (CFR) in 50 CFR Part 10.13. The U.S. Fish and Wildlife Service (USFWS) has statutory authority for enforcing the Migratory Bird Treaty Act (16 United States Code Sections 703-712).

Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (ESA) (16 United States Code Section 1531 et seq.) provides a regulatory program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The USFWS and National Marine Fisheries Service are the lead agencies responsible for implementing the ESA. The USFWS maintains a list of endangered species that includes birds, insects, fish, reptiles, mammals, crustaceans, plants, and trees. The USFWS and/or National Marine Fisheries Service requires authorization for any actions that they authorize, carry out, or fund, that may jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat.

California Endangered Species Act

The California Endangered Species Act (CESA) conserves and protects animals at risk of extinction. Plants and animals may be designated as threatened or endangered under CESA after a formal listing process by the California Fish and Game Commission. A CESA-listed species may not be killed, possessed, purchased, or sold without authorization from the California Department of Fish and Wildlife.

California Fish and Game Code Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code designate 37 species of wildlife as Fully Protected in California. Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take, except for the authorized collection of these species for necessary scientific research and relocation of bird species for the protection of livestock.

California Fish and Game Code Section 2081 Incidental Take Permits

Section 2081(b) of the California Fish and Game Code allows the California Department of Fish and Wildlife to authorize take of CESA-listed species categorized as endangered, threatened, candidate, or rare plant species if that take is incidental to otherwise lawful activities, and if certain conditions are met. Section 2081(b) permits are commonly referred to as an Incidental Take Permit.

City of Dublin Municipal Code

The City of Dublin Municipal Code Chapter 5.60: “the Heritage Tree Ordinance” (Ord. 5-02 § 2 (part): Ord. 29-99 § 1 (part)), requires that a Tree Removal permit from the Director be acquired prior to the removal of heritage trees. Heritage trees include:

1. *"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 measured at four (4) feet six (6) inches above natural grade;*
2. *A tree required to be preserved as part of an approved development plan, zoning permit, use permit, site development review or subdivision map;*
3. *A tree required to be planted as a replacement for an unlawfully removed tree."*

In addition, all applications for demolition, grading, or building permits on property containing one or more heritage trees shall prepare a tree protection plan pursuant to Section 5.60.090.

City of Dublin General Plan

The City of Dublin General Plan Chapter 7 Environmental Resources Management Conservation Element provides guidance for the protection of biological resources in Dublin and includes objectives, goals, and policies regarding biological resources.

The following goals and policies from the City's General Plan relating to biological resources apply to the Project:

- **Guiding Policy 7.2.1A1:** Protect riparian vegetation as a protective buffer for stream quality and for its value as a habitat and aesthetic resource
- **Implementing Policy 7.3.2B1:** Require erosion control plans for proposed development. Erosion control plans shall include recommendations for preventing erosion and scour of drainageways, consistent with biological and visual values.
- **Implementing Policy 7.4.1B2:** Enact and enforce the Heritage Tree Ordinance

Project Impacts and Mitigation Measures

(a) Substantial adverse effect on candidate, sensitive, or special status species (*Less Than Significant Impact with Mitigation Incorporated*)

Special-Status Plants

As discussed previously, the Project site is largely developed, and the entirety of the Project footprint is either paved or landscaped. There is no potential for special-status plant species to occur in the sod or landscaped areas present within the areas that would be disturbed during Project construction. Therefore, the Project would have **no impact** on special status plant species.

Special-Status Wildlife

A desktop analysis was conducted to identify special-status wildlife species that may be present in the vicinity of the Project site. Google Maps, Google Earth, and photographs of the site were used to identify potential habitats that may be impacted by the Project. In addition, the following online resources were used to identify special-status wildlife species with the potential to occur on or near the Project site:

- USFWS: Information for Planning and Consulting (IPaC) (USFWS 2023)
- California Department of Fish and Wildlife (CDFW): California Natural Diversity Data Base (CNDDB): The search area consisted of a 5-mile buffer on the Project site. (CDFW 2023)

As described in the Environmental Setting, natural habitats are absent from the Project footprint. None of the special-status species identified in the desktop analysis have life history requirements associated with buildings, hardscape, and landscape areas present in the Project footprint. As summarized in Table 6: Special-Status Species Potential to Occur in the Project Area, the Project footprint does not provide suitable habitat for any of the special-status wildlife species identified during the records search. The riparian corridor associated with Dublin Creek that runs immediately south of the Project footprint may provide suitable habitat for San Francisco dusky-footed woodrat and/or pallid bat. Because the Project would not involve direct disturbance within the riparian corridor, it would not directly destroy or alter such habitat, and there would be no impact to special-status species with potential to occur within the Project footprint area.

The Project footprint is located within 5 feet of the riparian corridor associated with Dublin Creek; however, construction activities would occur on existing paved areas (parking lot), and no construction equipment will enter Dublin Creek and associated habitat. Disturbance from noise and vibration (see Section 12) on wildlife could result during construction activities. However, these impacts would be minimal and only for a temporary period of time during construction. Furthermore, construction of the Project does not have the potential to result in introduction of non-native weeds to the riparian corridor of Dublin Creek since no construction equipment would enter the creek.

In the event that runoff from the Project or accidental spills entered species habitat within Dublin Creek, sedimentation or the introduction of pollutants to habitat within Dublin Creek would constitute a potentially significant impact. As discussed further in the Initial Study in Section 9, Hydrology (see **Appendix A**) the Project would avoid sedimentation or the introduction of pollutants to habitat within Dublin Creek through the required implementation of erosion and sediment control measures and the implementation of BMPs specified in the Stormwater Pollution Prevention Plan (SWPPP) during construction, which would protect habitat within Dublin Creek. Thus, no substantial indirect impacts to status species would occur.

Table 6: Special-Status Species Potential to Occur in the Project Area

Scientific Name	Common Name	Class	Status	Habitat Present
Danaus plexippus	Monarch Butterfly	Invertebrate	Federal Candidate	None
Branchinecta lynchi	Vernal Pool Fairy Shrimp	Invertebrate	FT	None
Hypomesus transpacificus	Delta Smelt	Invertebrate	FT, SE	None
Ambystoma californiense pop. 1	California tiger salamander - central California DPS	Amphibian	FT, ST	None
Rana draytonii	California red-legged frog	Amphibian	FT, SSC	None
Emys marmorata	western pond turtle	Reptile	SSC	None
Masticophis lateralis euryxanthus	Alameda whipsnake	Bird	FT, ST	None
Agelaius tricolor	tricolored blackbird	Bird	ST, SSC	None
Aquila chrysaetos	golden eagle	Bird	BGEPA, FP	None
Athene cunicularia	burrowing owl	Bird	SSC	None
Contopus cooperi	olive-sided flycatcher	Bird	SSC	None
Elanus leucurus	white-tailed kite	Bird	FP	None
Falco peregrinus anatum	American peregrine falcon	Bird	FP	None
Gymnogyps californianus	California Condor	Bird	FE, SE, FP	None
Sterna antillarum browni	California Least Tern	Bird	FE, SE, FP	None
Haliaeetus leucocephalus	bald eagle	Bird	BGEPA, SE, FP	None
Antrozous pallidus	pallid bat	Mammal	SSC	None in project footprint. Possible in riparian corridor.
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	Mammal	SSC	None in project footprint. Possible in riparian corridor.
Taxidea taxus	American badger	Mammal	SSC	None
Vulpes macrotis mutica	San Joaquin kit fox	Mammal	FE, ST	None
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	Plant	1B.1	None
Eryngium jepsonii	Jepson's coyote-thistle	Plant	1B.2	None
Extriplex joaquinana	San Joaquin spearscale	Plant	1B.2	None
Extriplex joaquinana	San Joaquin spearscale	Plant	1B.2	None
Helianthella castanea	Diablo helianthella	Plant	1B.2	None
Navarretia prostrata	prostrate vernal pool navarretia	Plant	1B.2	None

Status:
Federal
FE – listed as Endangered under the Federal Endangered Species Act
FT – listed as Threatened under the Federal Endangered Species Act
BGEPA – Bald and Golden Eagle Protection Act
State
SE – Listed as Endangered under the California Endangered Species Act
ST – Listed as Threatened under the California Endangered Species Act
SSC – State species of special concern
FP – Fully protected under California Fish and Game Code
California Rare Plant Rank
1B.1 - Rare or endangered in California and elsewhere – seriously threatened in California (more than 80 percent of occurrences threatened)
1B.2 - Rare or endangered in California and elsewhere – moderately threatened in California (20 to 80 percent of occurrences threatened)

Migratory Birds

The various shrubs, ornamental trees, and native trees in the Project footprint may provide suitable habitat for common nesting birds, such as house finch, mourning dove, common raven, and other birds that typically occupy urban environments. The USFWS IPaC tool also lists the following migratory bird species that could occur in the Project area: Allen's hummingbird (*Selasphorus sasin*), bald eagle (*Haliaeetus leucocephalus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), Bullock's oriole (*Icterus bullockii*), California gull (*Larus californicus*), California thrasher (*Toxostoma redivivum*), common yellowthroat (*Geothlypis trichas sinuosa*), golden eagle, (*Aquila chrysaetos*), Lawrence's goldfinch (*Carduelis lawrencei*), Nuttall's woodpecker (*picoides nuttallii*), oak titmouse (*Baeolophus inornatus*), olive-sided flycatcher (*Contopus cooperi*), tricolor blackbird (*Agelaius tricolor*), Western grebe (*Aechmophorus occidentatis*), wrentit (*Chamaea fasciata*), and yellow-billed magpie (*Pica nuttalli*).

As discussed in the regulatory section, these birds, their nests, and eggs are protected under the Migratory Bird Treaty Act. Noise and vibration from proposed construction activities associated with the Project could disturb birds that are nesting on and near the Project site, for both common nesting birds and American peregrine falcon. Although nesting birds in this urban setting are typically habituated to human activity and associated noise, the increased level of human activity at the site during construction could temporarily disturb nesting birds.

In addition, the Project would involve the removal of approximately 85 landscape trees within the Project footprint, which could be used by birds during the nesting season. If a tree containing an active nest were to be removed during construction, such removal would result in nest destruction and failure. Due to this potential for loss of nests, and due to potential disturbance of nesting birds from noise and vibration during Project construction, the impact to nesting birds would be potentially significant.

Mitigation Measure BIO-1, detailed below, is recommended to address this potentially significant impact to nesting birds.

Mitigation Measure BIO-1: Nesting Bird Avoidance Measures

A. *To the extent practicable, construction activities and any tree trimming/removal shall be performed from September 16 through February 15 to avoid the general nesting period for birds. If construction or tree trimming/removal cannot be performed during this period, nesting bird surveys and active nest buffers (as necessary) shall be implemented as follows:*

   i. *Nesting Bird Surveys: If Project-related work is scheduled during the nesting season (typically February 15 to August 30 for small bird species such as passerines; January 15 to September 15 for owls; and February 15 to September 15 for other raptors), a qualified biologist shall conduct a survey for active nests of such birds within 7 days prior to the beginning of Project construction. Appropriate minimum survey radii surrounding the work area shall be*

determined by the qualified biologist, but should be at least: i) 50 feet for passerines; ii) 300 feet for raptors. Surveys shall be conducted at the appropriate times of day and during appropriate nesting times, as determined by the qualified biologist.

ii. *Active Nest Buffers: If the qualified biologist documents active nests within the survey area, an appropriate buffer between the nest and active construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist shall conduct baseline monitoring of the nest to characterize "normal" bird behavior and establish a buffer distance which allows the birds to exhibit normal behavior. The qualified biologist shall monitor the nesting birds daily during construction activities and shall increase the buffer if the birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, the qualified biologist shall have the authority to cease all construction work in the area until the young have fledged and the nest is no longer active. Construction shall only be allowed to impact a migratory bird or its nest, including its young, if a permit from U.S. Fish and Wildlife Service is obtained in accordance with the MTBA and all permit conditions are adhered to.*

Mitigation Measure BIO-1 would protect nesting birds by ensuring that all active nests with the potential to be impacted by tree removal, construction noise, or human presence would be identified, appropriate avoidance buffers would be applied to active nests, and biologists would monitor active nests and bird behavior during construction so that the effectiveness of the buffer zone can be determined and the buffer distance can be adjusted if needed. Given the urban setting of the Project and presence of visual barriers such as other buildings and vegetation in the vicinity of the construction zone, the minimum search radii specified in **Mitigation Measure BIO-1** (50 feet for passerines and 300 feet for raptors) are considered appropriate to reduce potential disturbance of nesting birds to a less than significant level.

With the implementation of **Mitigation Measure BIO-1**, proposed construction and associated activities would not disturb nesting birds or destroy their nests; therefore, potential Project impacts to candidate, sensitive, or special status species would be reduced to **less than significant with mitigation**.

(b) Substantial adverse effect on any riparian habitat or other natural community (*Less Than Significant Impact*)

No riparian habitat or other sensitive natural communities are located within the Project footprint; therefore, Project construction or operation would not directly impact riparian habitat or other sensitive natural communities and is not expected to affect Dublin Creek. The Project would have **less than significant impact** on riparian habitat and sensitive natural communities. See Initial Study for the full analysis in Appendix A.

(c) Substantial adverse effect on wetlands (*Less Than Significant Impact*)

No wetlands or other waters of the U.S. or state are located within the Project footprint; therefore, Project construction or operation would not directly impact wetlands and other waters. Furthermore, no substantial indirect impacts would occur to Dublin Creek from the Project. Therefore, the Project would have **less than significant impact** on wetlands and waters of the U.S. or state. See Initial Study for the full analysis in Appendix A.

(d) Interfere or impede the movement of migratory fish or wildlife (Less Than Significant Impact with Mitigation Incorporated)

There are no documented migratory wildlife corridors, wildlife nursery sites, or large waterbodies or rivers in the vicinity of the Project site. The Project site is located between commercial and residential development, and the I-580 freeway. Resident and migratory waterfowl are not anticipated to use the Project site because it is already developed and contains no open waterbodies or other habitat frequented by such species. Therefore, the project would not interfere with or impede the movement of migratory waterfowl.

As discussed previously under Impact BIO-1, above, the riparian habitat associated with Dublin Creek could be used as habitat for migratory birds. However, Dublin Creek is a highly urbanized creek that generally parallels I-580. The creek supports a riparian canopy of trees, but there is no understory vegetation in the vicinity of the project. The feature runs to the west of the project with no riparian canopy before going underground, and runs underground to the east of the project before emerging with wide concrete banks. As such, this section of Dublin Creek is less likely to be used as a migratory corridor for common and special-status wildlife species. Because the project would not impact the riparian habitat, it would not directly interfere with or impede the movement of common and special-status wildlife species. *Indirect impacts to migratory birds from construction noise is addressed under Impact BIO-1, above.*

The riparian corridor associated with Dublin Creek could be used as foraging habitat for common bats. As such, trees that would be removed as part of the Project outside of riparian areas may provide suitable day or night roosting habitat for bat species. Given the availability of alternative natural habitat for hibernaculum in the vicinity of the Project and based on planned tree replacement, impacts to habitat for bats are not expected to be significant. However, if construction were to remove trees containing bats during the maternity or winter season, bat mortality could occur, and the impact to common bat species would be potentially significant.

Mitigation Measure BIO-2, detailed below, is recommended to address this potentially significant impact to roosting bats.

Mitigation Measure BIO-2: Roosting Bat Surveys and Avoidance

A. *The Project Applicant shall retain a qualified biologist to conduct a bat habitat assessment in all project areas that require tree removal. The qualified biologist shall identify and document the location of potentially suitable bat roosting habitat prior to construction activities. If no suitable bat habitat is observed, the biologist shall inform the Project Applicant, and no further considerations are required. If bat*

roosting habitat is observed, the location of such habitat areas shall be provided to the Project Applicant, and the following requirements shall be implemented throughout the construction period:

i. Removal of trees that provide suitable bat roosting habitat shall be conducted outside of the bat maternity season (April 15 to August 31) and overwintering season (October 16 to January 15) to the extent feasible.

i. Presence/absence surveys shall be conducted 2 to 3 days prior to removal of any trees in suitable bat habitat, at any time of year. If presence/ absence surveys are negative, work may proceed with no restrictions. If presence/absence surveys detect bats within trees planned for removal, work should proceed in accordance with the following restrictions:

- *If a maternity colony of bats is observed during maternity season (April 15 to August 31), tree removal shall not occur until August 31 or when maternity season has ended based on surveys conducted by a qualified biologist.*
- *If bats are observed during overwintering season (October 16 to January 15), tree removal shall not occur until January 15 or until bats are no longer present based on surveys conducted by a qualified biologist.*
- *If bats are present outside of maternity or overwintering seasons, construction shall follow a two-phase tree removal system conducted over 2 consecutive days. On the first day (in the afternoon), limbs and branches will be removed using chainsaws or other hand tools. Limbs with cavities, crevices, or deep bark fissures will be avoided, and only branches or limbs without those features will be removed. On the second day, the entire tree shall be removed.*

Mitigation Measure BIO-2 would ensure that construction activities do not have the potential to result in significant impacts to roosting bats, by avoiding tree removal during times of the year when bats are most sensitive to disruption (maternity and overwintering seasons) to the extent feasible and by either confirming that bats are absent prior to tree removal and/or following protocols that provide an opportunity for bats to relocate prior to tree removal. With the implementation of **Mitigation Measure BIO-2**, potential Project impacts to wildlife movement, migration, or nursery sites would be reduced to **less than significant with mitigation**.

(e) Conflict with local policies or ordinance include tree preservation (*Less Than Significant Impact*)

The proposed Project would adhere to the tree removal permit conditions, the Project would not conflict with the City's tree ordinance or the Dublin General Plan, and potential impacts would be **less than significant.**

(f) Conflict with adopted habitat conservation or natural community conservation plans (*No Impact*)

There would be **no** impact since there are no Habitat Conservation Plans or Natural Communities Conservation Plans that apply to the Project site. See Initial Study in Appendix A.

Source(s)

California Department of Fish and Wildlife Service (CDFW), 2023. Rarefind 5, a program created by the California Department of Fish and Wildlife that allows access to the California Natural Diversity Database. Reviewed January 17, 2023.

United States Fish and Wildlife Service (USFWS), 2023. IPaC Information for Planning and Consultation. Available online at: https://ecos.fws.gov/ipac/. Accessed on January 17, 2023.

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Section 3: Cultural Resources

ENVIRONMENTAL IMPACTS Issues	Significant and Unavoidable Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines section 15064.5?	X			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		X		

Environmental Setting

The Project site is at 11711 Dublin Boulevard in the City of Dublin, Alameda County, California and is approximately 8.81 acres. The project site is located south of Dublin Boulevard with the Dublin Heritage Park and Museums and Dublin Pioneer Cemetery to the east; I-580 to the south; and a business park to the west.

Historic-age built environment resources on the Project site consist of the Hexcel Corporation R&D facility, landscaping, and parking. The Contemporary/Brutalist style facility has a roughly L-shaped plan and was largely constructed in two phases dating to 1962 and 1967, with small additions and alterations in the mid-1980s.

Pre-contact Cultural Context

Archaeological evidence demonstrates that people have lived in the San Francisco Bay Area for at least the past 10,000 years. The pre-contact history of the San Francisco Bay archaeological region is most commonly understood as a series of cultural and temporal periods defined by the Central California Taxonomic System (CCTS). The CCTS was developed by Beardsley (1948) and Gerow (Gerow with Force 1968), based on observations in the San Francisco Bay Area, the Sacramento Valley, and the Delta region. This system was further refined by Bennyhoff and Hughes (1987) and Groza (2002). The CCTS includes an Early Period, Middle Period, Middle-to-Late Transition (MLT), and a Late Period, defined by a combination of changes in climate, artifact types, habitation patterns, and mortuary patterns. The following discussion will briefly describe each of these cultural-temporal periods, following Milliken et al. (2007).

Early Holocene (Lower Archaic): 8000-3500 B.C.

The people of the Early Holocene were mobile foragers, with seasonal, temporary camps located near food resources. The earliest archaeological site in the San Francisco Bay Area is CA-CCO-696 at Los Vaqueros Reservoir in Contra Costa County, dating to 7920 calibrated years

before the present (cal B.C.) This site included millingslabs (metates) and handstones (manos), used together to grind seeds, nuts, or other foods. Large wide-stemmed projectile points of Napa Valley obsidian were also found at the site. This assemblage is typical of Early Holocene sites in the San Francisco Bay Area.

Early Period (Middle Archaic): 3,500-500 B.C.

During the Early Period, new milling technology is introduced, and shell beads first made their appearance. In addition to millingslabs and handstones, assemblages now include mortars and pestles, suggesting greater reliance on acorns. Grooved stone net sinkers are also present, pointing to new fishing technology. Shell beads made from abalone (*Haliotis* sp.) and olive snails (*Olivella* sp.) were placed in burials as tokens of tribute or prestige, along with red ochre and ceremonial and ornamental artifacts. Settlement patterns were semi-sedentary, featuring long-term villages with organized cemeteries.

Lower Middle Period (Initial Upper Archaic): 500 B.C. - A.D. 430

During the Lower Middle Period, shell bead forms change abruptly, with new forms replacing the old. Bone tools were common, including awls made from deer bones, which were used for basketry. Barbless fish spears replace the net sinkers of the previous period. Mortars and pestles are more common than millingslabs and handstones. Large shell mounds are constructed, indicating further sedentism.

Upper Middle Period (Late Upper Archaic): A.D. 430-1050

Major change occurred in 430 A.D. Half of the known settlement sites were abandoned. The trade in saucer shaped shell beads from southern California collapsed, but were replaced with saddle bead forms. Hunting of sea otters intensified. More stylized forms appear, including ear spools, obsidian show blades, and fishtail charmstones. A new population seems to have moved into the area, with elaborate grave goods and distinct, extended, burial styles, which contrasted with the flexed burial positions seen in earlier periods. This new pattern is called the Meganos complex, and may be a sign of invasion or of multi-cultural communities.

Initial Late Period (Lower Emergent): A.D. 1050-1550

The Late Period was a time of increased social complexity. Status was earned, not inherited. Status objects became more elaborate, including large mortars with shell applique and straight sides (“flower pot” mortars) and many new forms of abalone shell ornaments. Mortuary practices included cremation and grave goods associated with social status. The bow and arrow was added to the hunting toolkit, and small projectile points were seen for the first time. Settlements were permanent, year-round villages.

Terminal Late Period (Protohistoric): A.D. 1550-1776

During the Terminal Late Period, lives were already influenced by the arrival of European explorers. Disease spread in advance of newcomers, impacting the Native populations as they came into contact with pathogens they had never encountered before. Populations thinned, and grave goods were less plentiful. Clam shell beads were introduced and made locally. The

forms of projectile points shifted from elaborate Stockton serrated points to simpler corner-notched forms.

In 1776, the first California Mission in the area was established by the Spanish in San Francisco, as well as a presidio. This was followed by the founding of Mission Santa Clara de Asís in 1777 and Mission San José in 1797. These marked the first European settlements in the San Francisco Bay Area, and led to major changes in the lives of Native Californians.

Ethnographic Context

An Ethnographic Context is provided within the Tribal Cultural Resources section of this EIR.

Historic Cultural Context

European Exploration (1542-1776 A.D.)

During the period of exploration, Europeans from Spain and England visited the coastline of California and a few inland areas, but did not visit the Amador Valley until Sergeant Pedro Amador passed through in 1795. Amador was the first to use the word “Alameda” to describe the area, meaning “place where cottonwoods grow”. Later that same year, Hermenegildo Sal and Father Antonio Danti began searching for locations to establish new Spanish Missions (Kyle et al. 2002).

However, even before Europeans set foot in the Amador Valley, their presence affected the Native people through spread of trade and disease. The first European ship to explore the coast of California was captained by Juan Rodriguez Cabrillo in 1542. Cabrillo’s party sailed as far north as Point Reyes, but only reported encounters with the Native population in Southern California. In 1579, the English explorer and pirate, Sir Francis Drake, anchored his ship, the *Golden Hind,* north of San Francisco in a small cove now known as Drake’s Bay. During their five week stay, Drake and his crew interacted extensively with the local residents, the Coast Miwok. Sebastian Rodríguez Cermeño led an expedition to scout the California coast for safe ports in 1594, again anchoring in Drake’s Bay. Cermeño’s ship was wrecked by a storm as they left, and survivors walked south as far as San Luis Obispo before there was any account of their interactions with the Native people. In 1602, Sebastian Vizcaino led another expedition along the coast, searching for a good location for a port to support trade between New Spain (Mexico plus Alta and Baja California) and the Philippines. On finding Monterey Bay, Vizcaino proclaimed it “all that one could hope for” (Beebe and Senkewicz 2001:44-45). Nevertheless, King Felipe III of Spain issued a royal order prohibiting further exploration of Alta California, due to the presence of established ports in Baja California. The Spanish did not return to the Alta California Coast for 160 years (Beebe and Sekewicz 2001, Kyle et al. 2002).

In 1770, the Spanish returned to establish a presidio (military base) and mission in Monterey, and then began to explore in search of other potential Mission locations. Expeditions set out in 1772, led by Captain Pedro Fages, in 1774, led by Captain Fernando Rivera, in 1775, led by Father Vincente Santa Maria, and in 1776, led by Juan Bautista de Anza and Pedro Font. While these expeditions reached Santa Clara, San Francisco, and portions of Alameda and Contra Costa Counties, they did not reach the Amador Valley (Beebe and Sekewicz 2001).

The Spanish Period (1776-1821 A.D.)

Seven Spanish missions were founded in Ohlone territory from 1776 to 1797, the closest being Mission San José, 14 miles south of the Project and founded in 1797. The Ohlone were recruited to the Mission through trade and offering of foods. However, once baptized, they were not allowed to leave the Mission, and became the workforce to grow food and raise livestock to support the new Spanish settlements. Anyone who tried to leave the mission to return to their old way of life or even visit their villages was considered a runaway, and was tracked down and forcibly returned to the missions. Due to harsh living conditions, devastating disease, and reduced birth rates, the population of Native Americans living in Mission San José rapidly dwindled, and the Spanish needed to range further to recruit new neophytes. According to Mission baptismal records, the Pelnen came to Mission San Jose between 1798 and 1805 and the Seunen, being further north, joined between 1801 and 1804 (Milliken 1995).

The Amador Valley was used as grazing land for livestock to support Mission San José. The introduction of cattle, horses, and sheep, and inadvertent introduction of invasive plant seeds, interrupted and changed the local ecosystem, depleting the resources that the Native Americans relied upon.

The Mexican Period (1821-1848 A.D.)

In 1821, Mexico gained independence from Spain, and Alta California became a Mexican province. By 1834, the Mexican government had begun a process of secularization of the Missions. Jose Maria Amador, having lived in the valley that would be named for him since at least 1830 (possibly 1826), received an official land grant from the Mexican governor of California in 1835. This vast grant of over 4 leagues (30,500 acres), became known as Rancho San Ramon. Amador's adobe home was constructed on the northwest side of the modern crossroad of Dublin Boulevard and San Ramon Road, within 0.25-miles of the Project location, and next to a natural spring called Almilla Springs (Kyle et al. 2002, VerPlanck 2003a). Amador's estate raised livestock, grew crops, and manufactured goods such as soap, leather goods, farm tools, and furniture, with the help of 150 Mexican and Native American employees (Minniear 2018). It is rumored that the burial ground for his workers was in the vicinity of the Pioneer Cemetery, although the cemetery was not officially consecrated until 1860 (VerPlanck 2003b).

California Statehood and the Development of the City of Dublin (1848 A.D. to Present)

Following the Mexican-American War (1846-1848), the Treaty of Guadalupe was signed, transferring control of Alta California officially from Mexico to the United States. California statehood soon followed in 1850. During the interim, gold was discovered in El Dorado County in 1848, leading to the California Gold Rush and a great influx of settlers (Kyle et al. 2002).

Amador tried his hand at gold prospecting but was largely unsuccessful. By 1852, he began selling off some of his property to ease some financial stress. Michael Murray and Jeremiah Fallon were two of the first to purchase land from Amador, south of Dublin Boulevard. The farmsteads soon grew into a settlement, and the settlement into a town, which was organized in 1853 as Murray Township, but in the late 1850s was also referred to as Amador's or Amador

Valley. James Witt Dougherty, partnering with William Glaskins, purchased ten thousand acres from Amador in 1862 (Minniear 2018).

In 1859, St. Raymond's Church was built in the location where it still stands on Donlan Way between Dublin Boulevard and I-580. During construction of the church, Tom Donlan fell to his death. A Catholic cemetery was established immediately west of the church, and Tom was the first to be officially buried there. However, historian Virginia Smith Bennett notes that the cemetery location had been used for burials before Donlan's interment (Bennett 1978:2). The land for the church and the Catholic portion of the cemetery was donated by Michael Murry and Jeremiah Fallon. The land for the Protestant portion of the cemetery was donated by James W. Dougherty (Kyle et al. 2002, VerPlanck 2003b, 2003c). Existing grave markers give testament to the ongoing usage of the cemetery until present day. However, a fire in 1917 destroyed several wooden grave markers, which were not replaced (VerPlanck 2003b). Old St. Raymond's Church (P-01-010635) was listed on the National Register of Historic Places in 2006 (NPS 06000242), as eligible under Criteria A and C, with Pioneer Cemetery (P-01010637) as a contributing element (NPS 2006). St. Raymond's Church has also been found eligible for listing on the California Register of Historical Resources (CRHR) under Criteria 1 and 3 (VerPlanck 2003c).

The Old Murray School (P-01-010636) was built on land owned by Dougherty in 1856, and served all of Dublin and Pleasanton. When I-580 was widened in 1975, the schoolhouse was moved to its present location, just south of Old St. Raymond's Church, and east of Pioneer Cemetery. It was restored by the Dublin Historic Preservation Association, and is now used as the Dublin Heritage Center (VerPlanck 2003d).

In the 1860s, the portion of the town to the south of the road to Stockton (now the I-580 corridor) was referred to as Dublin, reportedly based on a comment from James Witt Dougherty, saying that there were so many Irishmen south of the road to Stockton, it might as well be called Dublin (Kyle et al. 2003). By the 1870s, the name Dublin became common usage, however the name was not used officially until a post office was established in 1963. The City of Dublin was officially incorporated in 1982 (Minniear 2018).

John Green established a store in 1860 at the southeast corner of what is now Dublin Boulevard and Donlan Way, within 0.25-miles of the project location; Green's Store (P-01-08150) was remodeled in the 1930s, but was restored to its 1914 condition in 1981 and now serves as the Tri-Valley Church of Christ (VerPlanck 2003e).

Dublin was primarily an agricultural community through the early twentieth century, with much of the land tied up in just a few large farms. But in 1942 the community changed, as the U.S. Government purchased over 3,000 acres of land to establish Camp Parks, Camp Shoemaker, Shoemaker Naval Hospital, and a military prison, which later was relocated and became Santa Rita Jail (Minniear 2018). Hundreds of thousands of service members and their families passed through or moved into the Dublin area. Growth of Dublin took off in the 1960s, when the houses in the San Ramon Village area of Dublin were built, and supporting commercial development soon followed.

History of the Hexcel Property and Hexcel Products, Inc.

The following historic context, specific to the Project location, was prepared as part of the Historical Resources Evaluation technical memorandum of the Hexcel Corporation R&D facility at 11711 Dublin Boulevard, prepared by AECOM for the City of Dublin. The historic context, relevant figures, and full evaluation for eligibility for listing in the CRHR are in the memorandum appended to this Focused EIR as **Appendix C**.

Property Development

In October 1961, Royal Research Corporation (Royal Research), a scientific research and development enterprise, purchased 13 acres of undeveloped, agricultural-zoned land between Dublin Boulevard and Highway 50 from William T. and Alice K. Marsh. That same month Alameda County approved Royal Research's request to rezone the property into a special industrial zone to build a new research and development facility. At the time, Dublin was a small agricultural community with one school and one church, but a new 9,500-home development called San Ramon Village was underway on the north side of town. Royal Research surveyed the entire county to select a site to build their facility and chose this property because of the somewhat remote location. The company was already leasing a small office across the street at 11824 Dublin Avenue and were relying on the budding labor pool of new San Ramon Village residents (Hydro Geo Chem, Inc. 1994 July 1: Appendix A; Oakland Tribune 1960 September 4; Oakland Tribune 1961 October 27; Oakland Tribune 1960 August 7).

In 1962, Royal Research which manufactured enclosures for safe handling of radioactive and hazardous materials, commissioned construction of a 25,000-square-foot research and development facility on the subject property. The building housed offices and small laboratory spaces with a central courtyard in the north end, and the main laboratory area in the taller south end. Construction of the facility totaled nearly $350,000 with an additional $350,000 for equipment and was completed by the end of the year (Stockton Daily Evening Record 1962 July 31; Daily Review 1962 August 22).

Royal Research continued to occupy the facility until 1966 when it was sold to Hexcel Products, Inc. (Hexcel). Based in Berkeley, Hexcel was the largest developer and manufacturer of honeycomb, a structural material used in a number of applications, primarily associated with the aeronautics and aerospace industries. When looking to relocate from Berkeley, the executives at Hexcel sought a site somewhere between Carquinez Strait and Palo Alto, preferably near a college campus to draw from a technical labor pool for research and development, with the former Royal Research facility fitting its needs. Soon after the purchase, Hexcel announced a million-dollar, 20,000-square foot expansion of the research and development facility with a new administrative headquarters designed by San Francisco architecture firm Lackey, Knorr, Elliott & Associates. Hexcel closed their headquarters in Berkeley and relocated to Dublin and moved their manufacturing plants in Berkeley and Oakland to plants in Arizona, Texas, and Maryland (Hydro Geo Chem, Inc. 1994 July 1: Appendix A; Oakland Tribune 1966 May 18; Oakland Tribune 1967 November 12; San Francisco Examiner 1966 May 18; Contra Costa Times 1967 February 24).

Hexcel's new headquarters addition, completed in early 1967, housed the engineering, marketing, finance, and general administrative staff. The original 1962 section was utilized as laboratory space for further research and development. Hexcel president William S. Powell understood that technical employees were in great demand and wanted to entice new hires, so the building design included full-height tinted glass windows, courtyards, enclosed breezeways, and patios to provide outdoor views along with comfortable, carpeted workspaces, air conditioning, and taped music piped through an internal speaker system (Contra Costa Times 1967 March 26; Contra Costa Times 1967 February 24; Oakland Tribune 1967 November 12).

The Hexcel facility remained the same until the 1980s. In 1984 construction of a two-story hyphen connected the 1962 and 1967 buildings, resulting in a central courtyard. A small lab and chemical storage addition was constructed at the southeast corner of the facility the following year (Oakland Tribune 1984 May 16; Oakland Tribune 1984 July 11; Oakland Tribune 1985 November 13).

Royal Research Corporation

Royal Research Corporation, originally called Dublin Industries, was founded in Berkeley in 1959 by former Lawrence Radiation Laboratory staff (now known as the Lawrence Berkeley National Laboratory). The company focused on producing custom-made mechanical devices to handle radioactive materials. General Electric served as their primary customer for handling material at the Vallecitos Atomic Laboratory in nearby Sunol. In 1960, the company expanded into research, hiring Dr. William W.T. Crane, who headed heavy elements processing at Lawrence Radiation Laboratory from 1948 to 1958. Crane would later become president of the company. Dublin Industries merged with the Pasadena-based Royal Industries in August 1960, which was an engineering firm. After the merger, Dublin Industries was renamed Royal Research Corporation, operating as a subsidiary to Royal Industries (Daily Review 1962 August 22; Los Angeles Times 1957 October 11).

The first major research contract obtained by Royal Research was to develop an isotopic power supply for the Atomic Energy Commission that resulted in the creation of thermo-electric generators for underwater seismic stations that could last several years. Within two years, Royal Research expanded research into vacuum devices to handle reactive materials, energy conversion, and microwave technology; 90 percent of their contracts were with the U.S. government (Daily Review 1962 August 22).

In June 1963, Royal Industries, Inc. sold Royal Research to General Technology Corporation which included use of the Dublin plant (subject facility). Royal Industries, Inc. retained ownership of the plant before selling the facility to Hexcel Products, Inc. in 1966 (Pasadena Independent 1963 June 5; Hydro Geo Chem, Inc. 1994 July 1: Appendix A).

Hexcel Corporation

Hexcel Corporation can trace its formation to 1946 when two University of California alumni, Roger C. Steele and Roscoe T. "Bud" Hughes decided to experiment with new construction material technologies developed during World War II, including plastics, in Hughes' basement

at his house in Berkeley. Steele's experimentation led to the creation of structural honeycomb, which he demonstrated at a government-sponsored plastics conference as the California Reinforced Plastics Company. This demonstration secured a research and development contract of his expandable honeycomb for use in military aircraft radar domes in 1948. That same year, the company hired chemist Ken Holland to oversee resin research and development. The company furthered their ties with the military in 1949 when they won a low-bid contract to develop honeycomb fuel cell support panels for B-36 bombers (Pederson, ed. 1999: 193; Oakland Tribune 1967 May 22; Hexcel.com 2023; Contra Costa Times 1967 March 26).

In 1954, the company changed its name to Hexcel Products Inc. and continued creating honeycomb in a variety of materials including plastic, aluminum, fiberglass and paper, resulting in the highest strength-to-weight ratio material on the market with excellent energy absorption properties. Although the technology was initially used in aerospace, implementation of paper materials expanded use into commercial and residential building materials for use in interior partitions and mobile homes, and well as furniture manufacturing. By the end of the decade, Hexcel ran its headquarters out of Berkeley in a shared warehouse building at 2332 Fourth Street and had opened manufacturing plants in Berkeley, Oakland, and Havre de Grace in Maryland (Contra Costa Times 1967 March 26; Pederson, ed. 1999: 193; Oakland Tribune 1959 September 17; San Francisco Examiner 1962 July 2).

In the 1960s, Hexcel had several large contracts with the National Aeronautics and Space Administration (NASA), military, and commercial aviation clients. In 1968 Hexcel acquired Coast Manufacturing and Supply Company in Livermore and diversified the company's product range beyond structural honeycomb to include reinforced plastics, industrial glass fabrics, structural adhesives, industrial resin compounds, and diffusion bonded assemblies. This shift occurred as the Federal government began to divest large-scale pursuits and the public's interest in government programs shifted following the moon landing and withdrawal from Vietnam in 1969. Using the new materials procured from the Coast acquisition, Hexcel designed and produced high-performance snow skis. These were the first commodity made for the direct retail market (Times Record News 1970 April 10; Hexcel.com 2023; Pederson, ed. 1999: 193-194).

Hexcel continued to diversify its portfolio in the 1970s with the acquisition of a graphite weaving company and a knee, hip, and shoulder joint replacement manufacturer. By the end of the decade only half of their sales were from honeycomb (Pederson, ed. 1999: 194).

An economic downturn and oil crisis at the end of the 1970s led to the sale of the ski and medical products and a returned focus on aviation and aerospace. The company secured a number of high value contracts, for example with NASA for components in the Columbia Space Shuttle, with Boeing, their largest customer accounting for 20 percent of total sales, and with the U. S. Air Force for its new B-2 bomber program that prompted construction of a new 160,000-square-foot manufacturing plant in Arizona. However, deregulation of the airline industry by President Ronald Reagan cut airline profits, leading to reductions of Hexcel's Boeing and Airbus orders (Hexcel.com 2023; Oakland Tribune 1988 June 6).

The early 1990s were tumultuous for the company starting with a Chapter 11 bankruptcy protection filing in 1993. After layoffs and plant and asset sales, the company avoided bankruptcy. In 1996 Hexcel merged with two composites companies to improve vertical integration; the new combined firm had a total of 4,700 employees with 19 manufacturing plants in seven countries (Pederson, ed. 1999: 194-195).

Since the late 1990s, Hexcel continued to lead research and development in honeycomb, carbon fiber, and resin structural materials. The company has contracts with a number of aerospace companies including Airbus, Boeing, SpaceX, Blue Origin, and Lockheed Martin. In May 2021, a groundbreaking ceremony was held in West Valley City, Utah for the company's new research and technology headquarters with plans to vacate the Dublin facility in 2023 (Hexcel.com 2023).

Hexcel and NASA

In 1958, NASA utilized Hexcel honeycomb in their first spacecraft, Pioneer 1. The satellite probe included eight square feet of fiberglass reinforced Hexcel honeycomb plastic that only weighed 15 ounces. At a press conference hosted by Hexcel president Roger C. Steele in October 1958, he lauded the company's honeycomb "structural sandwich" construction as the "highest strength to weight ratio of any material known to man" and could be used "to build a space vehicle of extraordinary strength with an absolute minimum of weight" (Oakland Tribune 1958 October 23). The special fiberglass reinforced plastic honeycomb was developed for radio and electrical transmission properties, and the structural sandwich construction created a heat resistant barrier to protect the internal instrumentation. Although Pioneer 1 was meant to orbit the moon, a programming error resulted in the satellite only traveling 71,300 of the 222,000 miles, but did collect data of the extent of the Earth's radiation belts (Concord Transcript 1958 December 8).

Success of the structural integrity of Pioneer 1 led to more contracts between Hexcel and NASA. By the early 1960s, Hexcel developed cutting-edge materials for several space programs and missions including the Mariner Program satellites (1960-1975); Project Mercury spacecraft (1958-1961); Project Gemini spacecraft (1961-1966); and Apollo Program command and lunar module spacecraft (1960-1972). Hexcel honeycomb protected John Glen as he became the first American to orbit the earth in February 1962 in Friendship 7, part of the Mercury program (Oakland Tribune 1962 September 23; Hexcel.com 2023; Contra Costa Times 1970 June 21).

Hexcel continued research and development for NASA through the 1960s and created several types of honeycomb for NASA spacecraft. The Apollo 8 capsule held three astronauts when it left Earth's and orbited the Moon ten times in December 1968 and contained layers of honeycomb to create the lightweight but high-strength structural capsule shell. A cylindrical honeycomb called "tube-core" was installed under the astronauts' seats to help absorb G-force energy loads. A heatshield made of stainless-steel honeycomb and steel alloy sheets and an internal reinforced plastic honeycomb ablative heat shield were placed on the inside and outside of the capsule (Contra Costa Times 1968 December 4). This same structural and heat protection honeycomb was used in subsequent capsules in the Apollo program, including

Apollo 9 and Apollo 11. Hexcel also developed a new honeycomb used on the Apollo 11 lunar module landing struts and footpads for the first moon landing in July 1969. This specific honeycomb design crushed and folded-in on itself to a absorb the impact of the landing and prevent bouncing (Contra Costa Times 1967 March 26; Contra Costa Times 1969 March 28; Times Record News 1970 April 10). After the moon landing, a local newspaper interviewed proud Hexcel employees at the headquarters in Dublin. While the newspaper noted that 300,000 people from 20,000 companies were involved in some capacity with the moon landing, Hexcel stood out because they "developed the best material NASA has found for use in spacecraft" (Argus 1969 July 24).

Hexcel continued its NASA relationship into the 1970s and development of the Space Shuttle program. Hexcel honeycomb was used in the nose cap, payload doors, and wings in the first space shuttle Columbia that launched in April 1981. Columbia flew 28 missions during its 22 years in service (NASA.gov 2023; Hexcel.com 2023).

Hexcel also supplied $1 million worth of materials for the Discovery Space Shuttle launched in August 1984. Honeycomb was used in the cargo bay doors, a new carbon composite heat shield material that could be used on several missions before needing to be replaced and wove high-temperature resistant ceramic fabric to line the flight crew's cabin to protect them from extreme heat upon earth re-entry (Seguin Gazette Enterprise 1988 September 30; Hexcel.com 2023).

Lackey, Knorr & Elliott (1967 Hexcel addition)

Hexcel commissioned the large headquarters addition to the 1962 former Royal Research facility in 1967 from architects Lackey, Knorr & Elliott, based out of San Francisco. Donald R. Knorr and Edward P. Elliott formed their first partnership Knorr-Elliott & Associates in 1958. The firm received awards of excellence from Architectural Record for residential designs in 1958 and 1963; a citation for the Dux Incorporated furniture company headquarters and warehouse in South San Francisco in 1963; a merit award for a dental plaza in Stanford in 1963; and an environmental award for the Koret of California distribution plant in South San Francisco in 1968 (PCAD 2023b; AIA 1970: 516). In 1967, the partnership included architect Lawrence Lackey, with the 1967 Hexcel addition appearing to be the only design produced by the collaboration (Oakland Tribune 1967 November 12). Lackey was an urban planner, architect, and landscape architect based out of San Francisco, active between the late 1950s and 1970s. He was best known for the Master Plan he designed for the University of Fairbanks in Alaska in 1965 (PCAD 2023a; Contra Costa Times 1967 March 26).

Man in Space National Historic Landmark Theme Study

Congress passed Public Law 96-344 in 1980 which directed the Secretary of the Interior to produce a study that identified events and locations associated with the "Man in Space" theme to be brought into the National Park system and ways to present these significant locations, structures, and objects to the public. It also required evaluation of the resources identified with the Man in Space theme for recommendation as National Historic Landmarks (NHLs). The resulting study was first published in 1984 as "Man in Space: A National Historic Landmark

Theme Study," prepared by Dr. Harry A. Butowsky. In it, Butowsky identified 23 research and development facilities, testing facilities and stands, astronaut training facilities, tracking stations, mission control centers, a launch pad, and the Saturn 5 Space Vehicle that he recommended as NHLs and prepared NRHP Nomination Forms for each resource (Butowsky 1984 May: passim). Butowsky acknowledges that undoubtedly contractor-owned facilities and sites played significant roles in the United States' pursuit to the moon and subsequent space programs, however this document in its first phase does not identify or provide guidance about these properties.

The original report does however identify four significant themes for the Man in Space context which resources would be considered historically significant. They include: 1. Technical Foundations before 1958; 2. The Effort to Land a Man on the Moon; 3. The Exploration of the Planets and the Solar System; and 4. The Role of Scientific and Communications Satellites. These four subthemes provided a foundation for identification of significant properties. However, this early report lacks the details to clearly spell out what types of properties would or would not be significant under these subthemes for modern National Register of Historic Places (NRHP) analysis.

A second phase of the report was published later in 1984 that identified another launch pad as well as three spacecrafts, which were not previously identified in the first report. The three spacecrafts, Mercury Friendship 7 (1962), Gemini 4 (1964), and the Apollo 11 Command Module (1969) were all located in the National Air and Space Museum at the Smithsonian Institution in Washington, D.C. Butowsky declared the three spacecrafts as "nationally significant historic objects … it is important to recognize the national significance of the objects having internal integrity which have contributed critically to the success of the space program and, together, form an integral chapter in that program's history" (Butowsky 1984 August:1-2). These spacecrafts represented a first, or breakthrough, for each program's mission. While the first phase of the report stated that the second phase would examine the importance of contractors, it was not included. Butowsky did not specifically call out any private company, but he described the use of Hexcel fiberglass honeycomb in the description of the Apollo 11 Command Module. All three of these spacecrafts contain honeycomb developed by Hexcel for NASA (Butowsky 1984 August: passim).

Based on the results of AECOM's historical resource evaluation, the Hexcel Corporation R&D facility at 11711 Dublin Avenue (P-01-010656) is eligible for listing in the CRHR under Criterion 1 because it is significant at the national level for its association with the Man in Space historic context under subtheme 2. The Effort to Land a Man on the Moon and retains sufficient integrity to its period of significance (1967 and 1969). The property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code and is a historical resource for the purposes of CEQA.

Regulatory Framework

Cultural resources in California are protected by a number of regulations. The following provides a brief outline of the regulations, policies, and ordinances that are applicable to the proposed project.

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) (16 United States Code 470) and its implementing regulations (36 CFR 800) establish a program for the preservation of historic properties throughout the United States and provides a framework for identifying and treating historical and archaeological resources under the CEQA. Section 106 of the NHPA requires that federal projects or projects under federal jurisdiction consider the effect of an undertaking on properties eligible for or included in the NRHP. Historic properties that are listed in or eligible for the NRHP are considered historical resources for the purposes of CEQA.

National Register of Historic Places

Historic properties are those significant cultural resources that are listed in or are eligible for listing in the NRHP per the criteria listed below (36 CFR 60.4):

The quality of significance in American, state, and local history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

a. Are associated with events that have made a significant contribution to the broad patterns of our history;
b. Are associated with the lives of persons significant in our past;
c. Embody the distinctive characteristics of a type, period, or method of installation, or 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;
d. Have yielded, or may be likely to yield, information important in prehistory or history.

Ordinarily, cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP, unless they satisfy certain conditions. In general, a resource must be 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

Listing in the NRHP does not entail specific protection of, or assistance for a property. However, listing does guarantee the property's recognition during planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic

preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

Secretary of the Interior's Standards for the Treatment of Historic Properties

The "Secretary of the Interior's Standards for the Treatment of Historic Properties" (Secretary's Standards), codified in 36 CFR 67, provide guidance for working with historic properties. The Secretary's Standards are used by lead agencies to evaluate proposed rehabilitative work on historic properties. The Secretary's Standards are a useful analytic tool for understanding and describing the potential impacts of proposed changes to historic resources. Projects that comply with the Secretary's Standards benefit from a regulatory presumption that they would not result in a significant impact to a historic resource. Projects that do not comply with the Secretary's Standards may or may not cause a substantial adverse change in the significance of a historic property.

In 1992, the Secretary's Standards were revised so they could be applied to all types of historic resources, including landscapes. They were reduced to four sets of treatments to guide work on historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character and is most applicable to this Project. The Rehabilitation standards are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale, and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties shall be considered as mitigated to a level of less than a significant impact on the historical resource per CEQA Guidelines section 15064.5(b).

State

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "historical resources," "unique archeological resources," and "tribal cultural resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archeological resources.

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC § 21084.1; determining significant impacts to historical and archeological resources is described in the CEQA Guidelines, § 15064.5[a] and [b]). Per the CEQA Guidelines, section 15064.5(a), historical resources include the following:

(1) A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC § 5024.1).

(2) A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

(4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Cal. Pub. Resources Code § 5020.1(k)), or identified in a historical resources survey (meeting the criteria in Cal. Pub. Resources Code § 5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Cal. Pub. Resources Code§§ 5020.1(j) or 5024.1.

Non-Unique Archeological Resources

Under CEQA, archeological resources are presumed non-unique unless they meet the definition of "unique archeological resources" (Cal. Pub. Resources Code § 21083.2[g]). Under CEQA, an impact on a non-unique archeological resource is not considered a significant environmental impact.

Unique Archeological Resources

Archeological resources can sometimes qualify as "unique archeological resources" that are not "historical resources." (CEQA Guidelines, Section 15064.5(c)(3)). PRC, Section 21083.2(g) defines a unique archeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If a project can be demonstrated to cause damage to a unique archeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

California Register of Historical Resources

The CRHR is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The CRHR helps government agencies identify, evaluate, and protect California's historical resources, and indicates which properties are to be protected from substantial adverse change (Pub. Resources Code, Section 5024.1(a)). The CRHR is administered through the California Office of Historic Preservation (OHP) which is part of the California State Parks system. A cultural resource is evaluated under four CRHR criteria to determine its historical significance. A resource must be significant at the local, state, or national level in accordance with one or more of the following criteria set forth in the CEQA Guidelines Section 15064.5(a)(3) and Public Resources Code section 5024.1:

1. It is associated with events that have made a significant contribution to the broad pattern of California's history and cultural heritage;
2. It is associated with the lives of persons important in our past;
3. 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; or
4. It has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, the CRHR requires that sufficient time must have passed to allow a "scholarly perspective on the events or individuals associated with the resource." The CRHR also requires a resource to possess integrity, which is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

Codes Governing Human Remains

Human remains are protected by several laws in the State of California, including Health and Safety Codes (HRC) 7050.5, 7051, 7052, and 7055. Together these laws define criminal consequences for disturbing, disinterring, mutilating, or removing human remains from their place of rest or discovery.

Section 7050.5 of the Health & Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must then contact the California Native American Heritage Commission (NAHC), which has jurisdiction pursuant to Public Res. Code § 5097. The NAHC, pursuant to PRC Section 5097.98, will immediately notify the person it believes to be most likely descendant (MLD), of the deceased Native American person so they can inspect the burial site and make recommendations for appropriate treatment or disposition.

Section 7051 makes it a crime, punishable by imprisonment, to remove any human remains from the place where they have been interred or deposited without authority of law. Section 7052 protects human remains from mutilation and disinterment. Section 7055 makes it a crime to remove interred human remains from a cemetery.

Local

City of Dublin General Plan

The City of Dublin General Plan, Chapter 7 Environmental Resources Management Conservation Element, provides guidance for the protection of archaeological and historic resources in Dublin and guiding policies related to historic and cultural resources are as follows:

Guiding Policy 7.7.1A.1: Preserve Dublin's historic structures.

Seven sites in the Primary Planning Area are listed in the California Archaeological Inventory, Northwest Information Center, at Sonoma State University including the church and school on the grounds of the Dublin Heritage Park and Museums. As many as a dozen potentially significant historic and prehistoric sites have been identified in the Eastern Extended Planning Area.

Guiding Policy 7.7.1A.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.

Guiding Policy 7.7.1A.3: Preserve the Green Store.

The Green Store is a recognized historical resource and has been used as a church since 1989. This use can remain as long as the landowner(s) wish to continue its operation. The Parks/ Public Recreation designation on the General Plan Land Use Map illustrates the long-term potential for expansion of the Dublin Heritage Park and Museums to include this historic structure and the property it is on and is not intended to affect or change the current church use or its continued operation as a religious land use under a valid conditional use permit.

Dublin Village Historic Area Specific Plan

The Project site is located within the Dublin Village Historic Area Specific Plan boundary. The Dublin Village Historic Area Specific Plan (SP) was adopted in 2006 and updated in 2014. Applicable goals and objectives of the Dublin Village Historic Area Specific Plan related to historic and cultural resources are as follows:

Goal 1: Preserve and protect the valuable historic resources within the Dublin Village Historic Area.

Objective 1.1: Identify Dublin's historic resources and adopt a formal Historic Resources Inventory.

Objective 1.2: Identify mechanisms to protect properties on the Historic Resources Inventory from being destroyed or altered to the point of removing their historic value.

Objective 1.3: Identify incentives to encourage the preservation and enhancement of privately-owned historic resources.

Objective 1.4: Pursue formal designation and recognition of Dublin's historic resources through the California State Office of Historic Preservation and National Registry.

Objective 1.5: Work cooperatively with property owners to rehabilitate Alamilla Springs.

Objective 1.6: Ensure that improvements and renovations to publicly-owned historic resources are done according to the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Goal 2: Guide the design of future development to reinforce the unique historic qualities and design elements that once defined Dublin Village.

Objective 2.1: Create design guidelines for residential, commercial, and mixed-use development on private property.

Objective 2.2: Create design guidelines that provide direction for future streetscape improvements in the public right of way.

Objective 2.3: Create guidelines that provide direction on the preferred preservation and rehabilitation techniques for properties on the Historic Resources Inventory.

Additionally, the SP includes mitigation measures that apply to the treatment of historic resources within the Dublin Village Historic Area, drawn from the Initial Study and Mitigated Negative Declaration (IS/MND) prepared by the City in 2006 (City of Dublin 2006). The mitigation measures for the Project will meet the requirements set forth in the SP and the associated IS/MND (City of Dublin 2014: Appendix B; City of Dublin 2006).

> **SP Mitigation Measure 4**: In High Archeological Probability Areas (including a 150 meter (493 foot) corridor centered on Dublin Creek and within the general vicinity of St. Raymond's Church, Pioneer Cemetery, and the Dublin Square Shopping Center site), the permitting of future ground disturbance shall include provisions for further archival and field study by an archeologist, archeological testing and, and, if necessary, archeological monitoring during construction.
>
> **SP Mitigation Measure 5**: Should preconstruction excavation or borings be conducted outside of the High Archeological Probability Areas, but within the project area, a qualified archeologist shall monitor the work to define the presence or absence of buried resources in order to promote advance planning for mitigation purposes.
>
> **SP Mitigation Measure 6**: If a Native American artifact or human remains are identified during any demolition or construction in the project area, work on the project shall cease immediately until those steps outlined in CEQA Guidelines Section 15064.5 (e) can be taken to the satisfaction of the Dublin Community Development Director. Project work may be resumed in compliance with the requirements of Section 15064.5 (e). Additionally, the County Coroner shall be contacted immediately and Section 7050.5(b) of the California Health and Safety Code (relating to the discovery of Native American remains) should be implemented.
>
> **SP Mitigation Measure 7:** If an archeological, prehistoric, or paleontological resource is discovered during any demolition or construction in the project area, work on the project shall cease immediately until a resource protection plan conforming to CEQA Guidelines Section 15064.5 (f) is prepared by a qualified archeologist and approved by the Dublin Community Development Director. Project work may be resumed in compliance with such plan.

Dublin Historic Resources Inventory

The Dublin Historic Resources Inventory (HRI) was created when the Dublin Village Historic Area Specific Plan was adopted by the Dublin City Council in 2006. The HRI was established to "recognize those few remaining resources that have a place in Dublin's history, including those resources that might be significant to the immediate community but not significant at the state or federal level" (City of Dublin Community Development Department 2014: 27).

The HRI consists of resources that were found eligible for listing in the NRHP and the CRHR, or only having local significance, from the survey efforts undertaken in *Dublin Historic Resources Identification Project* that was finalized in 2004 by Page & Turnbull, Inc. The HRI includes only seven resources, three of which are near the 6600 block of Donlon Way: St. Raymond's Church, Murray Schoolhouse, and the Pioneer Cemetery, which have been combined as the "Dublin Heritage Center." The Pioneer Cemetery is adjacent to the Hexcel property, and historic documents suggest it extends into the Project parcel (VerPlanck 2003b).

The Dublin Village Historic Area Specific Plan did not establish goals or policies for maintaining or adding properties to the HRI. No guidelines were provided to reevaluate properties in the Dublin Village Historic Area that were less than 50 years old at the time the survey was conducted in 2004, nor any significance criteria or mechanisms for nominating or adding properties to the HRI.

Previous CEQA Documents

The City of Dublin hired the archaeological firm William Self Associates, Inc. (WSA) in 2003 to prepare an *Archaeological Assessment Report of the Donlon Way Specific Plan* (later renamed the Dublin Village Historic Area Specific Plan area). A record search at the Northwest Information Center (NWIC), conducted by WSA, did not identify any previously recorded archaeological sites within the Specific Plan area boundaries, but one new archaeological site was recorded during the pedestrian survey and Archeological High Probability areas were also identified within the Specific Plan area boundaries. The *Archaeological Assessment Report* concluded that there is a moderate-to-high-probability of identifying Native American archeological resources and a high-probability of encountering historic-period archeological resources within the Specific Plan area boundaries.

The City of Dublin hired the architectural firm Page & Turnbull, Inc. in 2003 to prepare the *Dublin Historic Resources Identification Project* that was finalized in 2004. The city contracted with Page & Turnbull to identify and map historic resources in an approximately 38-acre area for a future Specific Plan for the Donlon Way area (later renamed the Dublin Village Historic Area Specific Plan) and to prepare preservation recommendations. Page & Turnbull prepared a historic context of the Dublin Village area and recorded all of the properties in the survey area on Department of Parks and Recreation (DPR) 523 A and B forms. The Hexcel Corporation R&D facility on the Project site was recorded as part of this effort on December 10, 20003 (VerPlanck 2003f). At that time, the facility was not considered old enough (at least 50 years old) to be considered a potential historical resource under CEQA. Additionally, while the historic evaluation did contain a thorough historic context statement, it did not address the four

eligibility criteria for either the NRHP or the CRHR, but merely concluded that the property lacked architectural or historical significance to be eligible.

The Dublin Village Historic Area Specific Plan was adopted by the Dublin City Council on August 1, 2006, under Resolution No. 149-06 and relied on the findings of the *Archaeological Assessment Report of the Donlon Way Specific Plan* and the *Dublin Historic Resources Identification Project*. The approximately 38-acre Specific Plan area included the two project site parcels. Subsequently, three Specific Plan addendum and amendments have been prepared for the Specific Plan. City Council determined that no new significant impacts were identified by the addendums or amendments, and no further environmental analysis was required.

Project Impacts and Mitigation Measures

(a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines section 15064.5 (*Significant and Unavoidable Impact*)

A historical resource evaluation was prepared for the Hexcel Corporation's 1960s-constructed R&D facility on the Project site to assess its eligibility for listing in the CRHR as a potential historical resource for the purposes of CEQA (see **Appendix C**). The facility was determined to be eligible for listing in the CRHR under Criterion 1, because it is significant at the national level for its associations within the Man in Space historic context published by the National Park Service and is, therefore, considered a historical resource for the purposes of CEQA.

The significance of an historical resource is considered to be "materially impaired" when a project demolishes or materially alters the physical characteristics that justify the determination of an historical resources' significance. Because the proposed Project would result in the demolition of the existing Hexcel Corporation R&D facility, which is a historical resource for the purposes of CEQA, the Project would have a **significant and unavoidable impact** on a historical resource.

CEQA requires that all feasible mitigation must be completed even if it does not mitigate project impacts below a level of significance. CEQA Guidelines Section 15126.4(b), states that "In some circumstances, documentation of an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur." Therefore, recordation of a resource prior to demolition does not typically mitigate the physical impact on the environment caused by demolition or destruction of an historical resource; however, it does serves a legitimate archival purpose. Therefore, the following mitigation measures are required , even though they would not fully offset the loss of the resource, and the impact would remain significant and unavoidable.

Mitigation Measure CUL-1: HABS Recordation

> *In consultation with the City of Dublin Planning Division, the Project applicant shall document the Hexcel Corporation R&D facility prior to demolition. Documentation shall be performed by a Secretary of Interior-qualified professionals (in history or architectural*

history) and be consistent with the standards of the National Parks Service (NPS) Historic American Building Survey (HABS) and shall consist of the following elements:

1. *Historical Report: A qualified historian or architectural historian shall assemble historical background information relevant to the Hexcel Corporation R&D facility in short format Historic American Building Survey (HABS), based on HABS guidelines for historical reports. Much of this information may be drawn from the previous Historical Resource Evaluation and would detail critical information such as the property's significance, physical description, history, and a summary of information sources.*
2. *Photographs: Large-format, black and white photographs of the Hexcel Corporation R&D facility shall be taken and processed for archival permanence in accordance with HABS, Historic American Engineering Record (HAER), and HALS (Historic American Landscapes Survey) Photography Guidelines in effect at the time of recording. The standards require large-format black-and-white photography, with the original negatives having a minimum size of 4"x5". Digital photography, roll film, film packs, and electronic manipulation of images are not acceptable.*

The photographs shall be taken by a professional with HABS photography experience. A minimum of 10 and a maximum of 24 photographs must be taken, detailing the site, building exteriors, and interiors, specifically the R&D portion of the building. Photographs must be identified and labeled using HABS/HALS standards.

Following completion of the HABS documentation, including the short form historical report and large-format photographs, and approval by the City of Dublin, the materials shall be placed on file with the City of Dublin Planning Division, and the Dublin Historical Society at the Dublin Heritage Park and Museums.

Mitigation Measure CUL-2: Interpretive Displays

In concert with HABS documentation (Mitigation Measure CUL-1), the Project applicant shall install permanent interpretive displays or signage for public exhibition detailing the history and significance of the Hexcel Corporation R&D facility at the Project site. The interpretive displays or signage could be based on the photographs produced in the HABS documentation and the historic archival research previously prepared as part of the Project.

The interpretive displays or signage shall be prepared by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards, in coordination with an exhibit designer.

Interpretive displays or signage at the Project site shall be located outside of the new building, near the publicly accessible sidewalk and/or inside the new building in a prominent space, such as the lobby, where they may be viewed by employees and visitors.

Even with implementation of the mitigation measures identified above, the Project would still result in a significant and unavoidable impact to the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5, as it would result in its demolition. Therefore, the Project would have a **Significant and Unavoidable Impact with Mitigation Incorporated.** A discussion of alternatives that would involve the partial preservation and adaptive reuse of the portion of the building where the NASA research took place is presented in Alternatives Considered but Rejected section of this EIR.

(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5 (*Less Than Significant With Mitigation Incorporated*)

The proposed Project would include excavation of much of the Hexcel Corporation R&D facility property, which is adjacent to the Dublin Village Historic Settlement. The Dublin Village Historic Settlement is recorded as a historical resource for the purposes of CEQA (P-01-002127) and includes Old St. Raymond's Church, the Pioneer Cemetery, the Old Murray School, Green's Store, the site of the Green Mansion and Murray Homestead, and Donlon Way. St. Raymond's Church is listed on the National Register of Historic Places (NPS 06000242), eligible under criteria A and C, with the Pioneer Cemetery listed as a contributing element. Additionally, the Hexcel property falls within the Dublin Village Historic Area Specific Plan, therefore the project must abide by the mitigation measures proposed in the associated IS/MND (City of Dublin 2014; City of Dublin 2006).

Based on the existence of archeological resources within and adjacent to the Project area, there is a high probability of encountering historic-period archeological resources during ground disturbance at the Project site, particularly within those portions of the property closest to St. Raymond's Church and Pioneer Cemetery, and a high probability of identifying Native American archeological resources, particularly within a 150 meter (493 foot) corridor centered on Dublin Creek.

Section 15126.4 of the CEQA Guidelines directs public agencies to avoid damaging effects on an archeological resource whenever possible. For a project that could impact an archeological resource, Section 15064.5 (Determining the Significance of Impacts on Historical and Unique Archeological resources) of the CEQA Guidelines applies and all requirements of this section shall be met in the course of reviewing and implementing the Project. In order to mitigate any potential impacts to resources in the Project area, further archival and field study by an archeologist shall be undertaken prior to the construction of any development projects in the area in accordance with the recommendations of the Dublin Village Historic Area Specific Plan and associated IS/MND (City of Dublin 2014; City of Dublin 2006).

In sum, there is a high potential for previously unrecorded archaeological resources associated with the historic settlement to be within the Hexcel Property. Additionally, the Hexcel property is adjacent to the marked boundary of the Pioneer Cemetery, a contributing element to the NRHP listed resource, St. Raymond's Church (P-01-010635 / CA-ALA-521H / NPS 06000242).

The High Archeological Probability Areas identified for this Project, per the guidance of the Dublin Village Historic Area Specific Plan and associated IS/MND, are the areas most proximate to St. Raymond's Church and Pioneer Cemetery, and a 150 meter corridor centered on Dublin Creek. This includes the portion of the Project site to the east of the existing Hexcel building and much of the southern parking lot, approximately 115,763 square feet of the total project area of 383,764 square feet (30 percent). Per the proposed design, excavation within this High Archaeological Probability Area would exceed 1 foot below ground surface (bgs) in an area of approximately 61,850 square feet (53 percent) of the area, with a maximum depth of approximately 12 feet bgs.

The possibility of encountering buried archaeological resources in the Project area outside of the High Archeological Probability Area, remains a concern as well, and per the mitigation measures in the Dublin Village Historic Area Specific Plan and associated IS/MND, requires mitigation to avoid adverse impact.

If previously unrecorded archaeological resources associated with historical resources are present within the Hexcel property and/or if burials extend beyond the marked boundary of the adjacent Pioneer Cemetery, earthmoving and excavation activities to implement the Project could damage or destroy these buried resources, and the Project impact to archaeological resources would be **potentially significant**.

Mitigation Measure CUL-3: Archaeological and Tribal Monitoring

A. A qualified archaeologist that meets the Secretary of the Interior's Professional Qualification Standards for archaeology shall be retained by the applicant prior to implementing construction or soil remediation activities that involve earthmoving or soil excavation, and the archaeologist shall be available for consultation or evaluation of any cultural resources uncovered by such activities. Prior to the start of excavation, the archaeologist shall produce a **Treatment and Monitoring Plan**, in consultation with the City of Dublin, and through them, with any consulting Native American tribes. The Treatment and Monitoring Plan will comply with mitigation measures 4, 5, 6, and 7, set forth in the Dublin Village Historic Area Specific Plan, Appendix B, and will specify the following:

    i. Archaeological testing to be done prior to the start of construction.

    ii. Archaeological and Tribal monitoring requirements, which will be based on the results of archaeological testing and consultation with Native American tribes.

    iii. Procedures and considerations for handling, documenting, analyzing, and curation of any historic-era or pre-contact era artifacts encountered during project activities.

    iv. Procedures and considerations for handling, documenting, analyzing, and curation of any human remains from the historic era. (For human remains of

Native Americans, treatment protocols would be established with the designated MLD).

B. If an archaeological resource (or suspected resource) is discovered during monitoring of project activities, construction or excavation activities within a 50-foot radius of the find shall be temporarily halted or directed to other areas, pending the archaeologist's evaluation of its significance. If the resource is significant, data collection, excavation, or other standard archaeological or historical procedures shall be implemented to mitigate impacts, pursuant to the Treatment and Monitoring Plan and the archaeologist's direction. If any human remains are encountered, the archaeologist shall contact the appropriate County Coroner immediately, and security measures shall be implemented to ensure that burials are not vandalized until the decision of burial deposition has been made pursuant to California law. If human remains are determined to be Native American interments, the Coroner shall contact the Native American Heritage Commission pursuant to Public Resources Code Section 5097.98 and follow the procedures stated herein and other applicable laws. A report by the archaeologist evaluating the find and identifying mitigation actions taken shall be submitted to the CPUC. Where appropriate to protect the location and sensitivity of the cultural resources, the report may be submitted under Public Utilities Code Section 583 or other appropriate confidentiality provisions.

Mitigation Measure CUL-4: Inadvertent Discovery Protocols

A. Prior to the start of ground disturbing activities, the applicant shall retain a qualified archaeologist that meets the Secretary of the Interior's Professional Qualification Standards for archaeology to implement archaeological awareness training for all construction personnel involved with ground disturbing or excavation activities. The training shall include information regarding the possibility of encountering buried cultural resources, the appearance and types of resources likely to be seen during construction, notification procedures, and proper protocols to be followed should suspected or confirmed resources be encountered by the crew. This training shall be provided once to each worker involved in ground-disturbing activities before they begin work, and shall be documented in training records.

B. In the event that precontact or historic-age resources (or suspected resources) are inadvertently discovered during Project implementation, all activity within a 50-foot radius of the find shall be stopped, the City of Dublin's Project Manager shall be notified, and a qualified archaeologist shall be retained by the City of Dublin to examine the find, pursuant to Mitigation Measure 7 set out in the Dublin Village Historic Area Specific Plan, Appendix B. Project personnel shall not collect or move any historic material. The archaeologist shall evaluate the find(s) within 48 hours to determine if it meets the definition of a historical or unique archaeological resource and follow the procedures outlined below:

i. If the find(s) does not meet the definition of a tribal cultural resource, a historical resource or a unique archaeological resource, no further study or protection is necessary prior to resuming Project implementation.

ii. If the find(s) does meet the definition of a historical resource or unique archaeological resource, then it shall be avoided by Project activities and preserved in place. If avoidance is not feasible, as determined by the City of Dublin, the qualified archaeologist shall make appropriate recommendations regarding the treatment and disposition of such find(s), and significant impacts to such resources shall be mitigated in accordance with the recommendations of the archaeologist prior to resuming construction activities within the 50-foot radius.

iii. If the find(s) does meet the definition of both a tribal cultural resource and a historical or unique archaeological resource, then it shall be treated in accordance with Mitigation Measure CUL-3.

C. Recommendations for treatment and disposition of find(s) could include, but are not limited to, archaeological monitoring, collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery shall be submitted to NWIC.

i. In the event that archaeological resource(s) are discovered during Project implementation, an archaeological monitor shall be retained to monitor all ground- disturbing activities in the vicinity (i.e., within 50 feet) of the find.

Archaeological monitors have the authority, upon the finding of a potential resource, to request that work be slowed, diverted, or stopped if archaeological resources are identified within the direct impact area.

If the resource is determined by an archaeologist to be a historical or unique archaeological resource, the archaeologist shall amend the Treatment and Monitoring Plan, with measures to avoid or reduce impacts to the resource. The treatment plan measures may include, but not be limited to, avoidance and preservation in place (the preferred method if feasible), capping, incorporation of the site within a park or other open space, or data recovery. If the resource is also a tribal cultural resource, then designated representatives from the consulting tribe(s) shall make appropriate recommendations regarding the treatment and disposition of such find(s) in accordance with Mitigation Measure CUL-3 and these recommendations shall be incorporated into the treatment plan.

The mitigation measures require training for all construction workers so that they are aware of the potential for encountering buried resources and the procedures that need to be followed if potential precontact or historic period archaeological resources are encountered during on-site activities, as well as the regulations pertaining to discovery of human burials. Because the mitigation measures require stopping work within the area of any potential find(s), and require

that a qualified archaeologist inspect the find and make recommendations for avoiding or reducing impacts (in collaboration with tribal representatives), implementation of mitigations CUL-3 and CUL-4, would reduce the potential impact on archeological and buried resources to **less-than-significant with mitigation**.

(c) Disturb any human remains, including those interred outside of dedicated cemeteries (*Less Than Significant*)

The proposed Project would include excavation of the parking lot to the south of the Hexcel Corporation R&D facility, which is adjacent to the marked boundary of the Pioneer Cemetery. Marked grave sites in the cemetery are within five feet of the Hexcel property fence. Historic documents suggest that the cemetery was larger than the currently marked boundary, and was used as an Ohlone burial site and as a burial ground for Native American and Mexican farm workers on José María Amador's Ranchero San Ramón prior to consecration of the official cemetery in 1860 (Bennett 1978, VerPlanck 2003b).

For these reasons, there is a high probability that portions of the cemetery extend to the west of the marked cemetery, beneath the Hexcel parking lot. As designed, excavation depths in the area outside the existing building footprint would range up to 10 feet below surface along the southern boundary of the Hexcel property. If unmarked portions of the cemetery extend beneath the Hexcel property, the Project has the potential to disturb human remains during earthmoving and excavation activities to implement the Project. The disturbance of human remains could be a **potentially significant** impact if measures are not taken to protect the remains from damage, destruction, or discretion.

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in Section 5097 of the California Public Resources Code. The California Health and Safety Code (Sections 7050.5, 7051, 7052, and 7055) also has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, protect them from disturbance, vandalism, or destruction, and established procedures to be implemented if Native American skeletal remains are discovered. Public Resources Code Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes.

Compliance with these regulations is mandatory for all projects; therefore, if human remains are encountered during Project implementation, work at the project site would stop, the Alameda County Coroner would be notified immediately, and no further disturbance would occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The remains would be protected from disturbance, vandalism, or destruction until such decision is made. If the human remains are determined to be from the historic-era, treatment, including excavation, documentation, analysis, and curation, will follow the archaeological Treatment and Monitoring Plan, as per CUL-3.A.iv. If the human remains are determined to be Native American, the coroner is required to notify the NAHC, which would determine and notify a most likely descendant (MLD) within 24 hours. The MLD must complete the inspection of the site within 48 hours of notification and may recommend scientific removal

and non-destructive analysis of Native American human remains and items associated with Native American burials. Pre-activity archaeological testing is to be included as part of the Archaeological Treatment and Monitoring Plan, per CUL-3.A.i. Archaeological testing prior to any ground disturbing activities would reduce the potential for disturbance of human remains during construction. However, it should be noted, archaeological testing would not eliminate the potential or degree to impact human remains, but would give the contractor more information on whether the resources are present and at what depths they could be encountered. The Reduced Grading Alternative, described in the Alternatives section, would be the most effective way to reduce the potential for adverse impacts. In addition, **Mitigation Measure CUL-4** specifically requires training for all construction workers on the required regulations and procedures to be followed in the event that human burials are encountered.

Compliance with the mandatory regulations pertaining to human burials would reduce the potential for destruction or desecration of human remains, if encountered during project construction. Compliance with procedures defined in the archaeological Treatment and Monitoring Plan and/or in negotiation with the MLD will ensure that the treatment of human remains will be respectful, and will be mitigated to the satisfaction of consulting descendent populations. As a result, the impact would be **less than significant with mitigation**.

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Section 4: Energy

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.	**ENERGY. Would the project:**				
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?		X		
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Environmental Setting

The proposed Project is located in the City of Dublin within Alameda County. Electric and natural gas services to Alameda County are provided by Pacific Gas & Electric Company (PG&E). In 2021, PG&E delivered approximately 78,588 gigawatt-hours of electricity within its service area (California Energy Commission 2023a). PG&E's total natural gas throughput was approximately 4,467 million therms in 2021 (California Energy Commission 2023b). PG&E provides power from a variety of sources: biomass and biowaste, geothermal, small and large hydroelectric, solar, wind, natural gas, and nuclear (PG&E 2021).

In 2018, East Bay Community Energy (EBCE) began serving Dublin residential, business, and municipal electricity customers. To help meet the greenhouse gas (GHG) emissions reductions goals set in the City of Dublin's Climate Action Plan 2030 and Beyond (discussed below), the Dublin City Council voted in January 2021 to set the default electricity option for Dublin residences to EBCE's Renewable 100 service, which began in January 2022, and is sourced from California wind and solar facilities, including a new wind farm in Livermore. Customers can change their EBCE service or return to PG&E service at any time. All municipal electric accounts in Dublin have been powered by Renewable 100 since July 2019 (City of Dublin 2023).

Transportation, such as gasoline and diesel fuel consumption, is also an energy-consuming sector, and applicable to the proposed Project (diesel and gasoline fuel consumption during construction and operational activities). Transportation is the largest energy-consuming sector in California, accounting for approximately 34 percent of all energy use in the state in 2020 (EIA 2022a). Historically, gasoline and diesel fuel accounted for nearly all transportation-related energy demand; now, however, numerous transportation power options are available, including ethanol, natural gas, electricity, and hydrogen. Nonetheless, despite advancements in alternative fuels and clean-vehicle technologies, gasoline and diesel remain the primary fuels used for transportation in California, with 12.7 billion gasoline gallon equivalents of petroleum (GGEs) consumed in 2021 and 3.7 billion GGEs of diesel consumed in 2020 (DOE 2023).

Regulatory Framework

Energy Policy and Conservation Act of 1975. The Energy Policy and Conservation Act of 1975 established the first fuel economy standards for on-road motor vehicles sold in the United States. The National Highway Traffic and Safety Administration is responsible for establishing standards for vehicles and revising the existing standards. The Corporate Average Fuel Economy (CAFE) program was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA administers the testing program that generates the fuel economy data.

Energy Policy Acts of 1992 and 2005. The Energy Policy Act of 1992 was enacted to reduce dependence on imported petroleum and improve air quality by addressing all aspects of energy supply and demand, including alternative fuels, renewable energy, and energy efficiency. This law requires certain federal, state, and local government and private fleets to purchase alternate fuel vehicles. The act also defines "alternative fuels" to include fuels such as ethanol, natural gas, propane, hydrogen, electricity, and biodiesel.

The Energy Policy Act of 2005 was enacted on August 8, 2005. This law set federal energy management requirements for energy-efficient product procurement, energy savings performance contracts, building performance standards, renewable energy requirements, and use of alternative fuels. The Energy Policy Act of 2005 also amends existing regulations, including fuel economy testing procedures.

Energy Independence and Security Act of 2007. Signed into law in December 2007, the Energy Independence and Security Act was enacted to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the federal government's energy performance; and increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The Energy Independence and Security Act included the first increase in fuel economy standards for passenger cars since 1975. The act also included a new energy grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs.

Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards. On May 7, 2010, the final Light-Duty Vehicle GHG Emissions Standards and CAFE Standards were published in the Federal Register. Phase 1 of the emissions standards required that model year 2012–2016 vehicles meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO_2) per mile, which is equivalent to 35.5 miles per gallon, if the automobile industry were to meet this CO_2 level solely through fuel economy improvements.

On March 31, 2022, the National Highway Traffic Safety Administration finalized the CAFE Standards for model years 2024-2026. The final rule establishes standards that would require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025, and 10 percent annually for model year 2026.

Heavy-Duty Engine and Vehicle Standards. In September 2011, in response to a Presidential Memorandum issued in May 2010, EPA in coordination with National Highway Traffic Safety Administration (NHSTA) issued GHG emissions and fuel economy standards for medium and heavy duty trucks manufactured in model years 2014-2018, known as Phase 1 GHG Rule.

In October 2016, EPA and NHTSA jointly finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution to reduce the impacts of climate change, while bolstering energy security and spurring manufacturing innovation.

On December 20, 2022, EPA adopted a final rule, "Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards," that sets stronger emissions standards to further reduce air pollution, including pollutants that create ozone and particulate matter, from heavy-duty vehicles and engines starting in model year 2027. The final program includes new, more stringent emissions standards that cover a wider range of heavy-duty engine operating conditions compared to today's standards, and it requires these more stringent emissions standards to be met for a longer period of time of when these engines operate on the road. This final rule is consistent with President Biden's Executive Order, "Strengthening American Leadership in Clean Cars and Trucks" and is the first step in the Clean Trucks Plan.

City of Dublin General Plan. The City of Dublin General Plan, adopted in 1985 and amended in 2022, includes an Environmental Resources Management: Energy Conservation Element. The following implementing policies related to energy efficiency and conservation in new development would be applicable to the proposed Project (City of Dublin 2022):

- 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, [light emitting diode] 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.
- New development projects shall install LED streetlights in compliance with the City's LED light standard.
- In new commercial and residential parking lots, require the installation of conduit to serve EV parking spaces to enable the easier installation of future charging stations.
- 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).
- 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.
- 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.

- Promote and encourage photovoltaic demonstration projects in association with new development.

City of Dublin Climate Action Plan 2030. The City of Dublin adopted its Climate Action Plan 2030 and Beyond (CAP 2030) in September 2020, as a guiding document to identify ways in which the community and City can reduce GHG emissions, meet Dublin's long-term climate action goals, and promote a healthy, prosperous community. The CAP 2030 focuses on the following strategies: 100 percent renewable and carbon-free electricity; building efficiency and electrification; sustainable mobility and land use; materials and waste management; and municipal leadership measures (City of Dublin 2020).

Project Impacts and Mitigation Measures

(a) Wasteful, inefficient, or unnecessary consumption of energy resources (Less Than Significant Impact With Mitigation Incorporated)

Energy efficiency is a possible indicator of environmental impacts. The actual adverse physical environmental effects of energy use and the efficiency of energy use are detailed throughout this EIR and the Initial Study in Appendix A in the environmental topic-specific sections. For example, the use of energy for transportation sources (including construction equipment and haul trucks) leads to GHG emissions, the impacts of which are addressed in Section 3.9, Greenhouse Gas Emissions. There is no physical environmental effect associated with energy use that is not addressed in the environmental topic-specific sections of this EIR and the Initial Study in Appendix A.

The proposed Project activities would increase energy consumption for the duration of construction in the form of fossil fuels (e.g., gasoline, diesel fuel). Transportation energy use during construction would come from the transport and use of construction equipment (off-road), delivery and haul trucks (on-road), and construction employee passenger vehicles (on-road). Construction-related transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Most of the construction equipment used during demolition and construction activities would be gas- or diesel-powered equipment. The use of fuel by on-road and off-road vehicles would be temporary and would fluctuate according to the phase of construction. Construction fuel use under the proposed Project would cease upon completion of construction activities.

The annual energy consumption was estimated using the CalEEMod CO_2 emissions calculations for the proposed construction activities, application of the U.S. Energy Information Administration's CO_2 emissions coefficients (EIA 2022b) to estimate fuel consumption for construction activities, and The Climate Registry's 2022 Default Emission Factors (The Climate Registry 2022) to estimate the energy content per fuel type. Additional modeling assumptions and more details are provided in Section 3.4, Air Quality, and **Appendix D.** Construction and operational energy consumption associated with the proposed Project is summarized in Table **7**: Construction and Operational Energy Consumption.

Table 7: Construction and Operational Energy Consumption

Energy Consuming Activity	Energy Requirement	Unit	Annual Energy Consumption (MMBtu)
Construction Diesel Consumption (amortized)[1]	1,278	gal/year	176
Construction Gasoline Consumption (amortized)[1]	201	gal/year	25
Construction Fuel Subtotal (amortized)	**-**	**-**	**202**
Building Electricity Consumption [2]	1,209,922	kWh/year	4,128
Building Operations Energy Subtotal	**-**	**-**	**4,128**
Transportation Electricity Consumption [2]	32,528	kWh/year	111
Transportation Diesel Consumption [2]	6,174	gal/year	852
Transportation Gasoline Consumption [2]	49,324	gal/year	6,166
Transportation Subtotal	**-**	**-**	**7,128**
Total Project Energy Requirement	**-**	**-**	**11,458**
Existing Land Uses Energy Requirement	-	-	12,236
Net Project Total	**-**	**-**	**(778)**

Notes: gal/year = gallons per year; kWh/year = kilowatt hours per year; MMBtu = million British thermal units

[1] Since construction-related energy demand would cease upon completion of construction, energy demand associated with construction of the proposed Project was amortized over the proposed Project lifetime. The assumed amortization period is 30 years, based on the typically assumed project lifetime based on other air districts (e.g., South Coast Air Quality Management District [2008]).

[2] The operational energy consumption estimates assumed the proposed Project would include 18,000 square feet of office space, 36,500 square feet of light industrial space, and 70,804 square feet of warehousing space. Based on the latest site plan, it is anticipated the proposed Project would include 18,000 square feet of office space, 30,000 square feet of light industrial space, and 77,304 square feet of warehousing space. As light industrial land uses generate higher daily vehicle trips than warehousing land uses, daily vehicle trips and the associated energy consumption due to fuel usage is anticipated to be lower (i.e., the energy estimates assumed the proposed Project would generate 494 daily trips, based on the 2022 Transportation Impact Study (W-Trans 2022); however, the proposed Project based on the updated site plan is anticipated to generate approximately 468 daily trips). Similarly, based on California Emissions Estimator Model (CalEEMod) default data, building energy consumption rates for light industrial land uses are higher than building energy consumption rates for warehousing space. As such, the energy consumption presented above is conservative since fuel consumption and electricity consumption would be lower. Therefore, implementation of the proposed Project would result in a higher net reduction in energy consumption compared to existing conditions.

Based on the anticipated phasing of the construction activities, the anticipated equipment and construction work staff, the temporary nature of construction, and the project type, the proposed Project would not include unusual characteristics that would necessitate the use of construction equipment that is less energy-efficient than the equipment used at comparable construction sites.

In addition, construction contractors are required, in accordance with **Mitigation Measure AQ-1** and the CARB Airborne Toxic Control Measure for Diesel-Fueled Commercial Motor Vehicle Idling, to minimize the idling time of construction equipment and trucks by shutting equipment off when it's not in use or reducing the idling time to 5 minutes. Per **Mitigation Measure AQ-1**, construction contractors would also be required to maintain and properly tune all construction equipment in accordance with the manufacturer's specification. These required practices would limit wasteful and unnecessary energy consumption.

The proposed Project would redevelop an existing industrial building consisting of research and development land uses, with a new building approximately double the size of the existing building, consisting of office, warehouse, and light industrial land uses. Although the proposed Project is approximately double the size of the existing building, as shown in Table 7 the proposed Project would result in a net reduction in energy consumption, primarily related to improved building energy standards and eliminating natural gas infrastructure.

Therefore, energy consumption associated with construction and operation of the proposed Project would not be inefficient, wasteful, or unnecessary with Mitigation Measure AQ-1 incorporated. This impact would be **less than significant with mitigation**.

(b) Conflict with local plan for renewable energy (No Impact)

The proposed Project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency and there would be **no impact**. See the Initial Study in Appendix A for the complete analysis.

Source(s)

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Section 5: Geology and Soils

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Environmental Setting

Seismic Hazards

The Project site is situated in a seismically active area within the Diablo Range, along the margin of the eastern Diablo Hills and the western edge of the Livermore Valley. The fault trace of the active Calaveras Fault is approximately 965 feet east of the Project site, and the Alquist-Priolo Earthquake Fault Zone associated with the Calaveras Fault is approximately 450 feet east of the Project site (DOC 2023). The active Pleasanton Fault is approximately 2.4 miles east of the Project site (Jennings and Bryant 2010). Other active faults in the Project region include a portion of the Las Positas Fault (approximately 11.7 miles to the southeast), the Greenville Fault (approximately 12.5 miles to the northeast), and the Hayward Fault Zone (approximately 7.3 miles to the southwest).

The Project site is located within an Earthquake Zone of Required Investigation for liquefaction as delineated by the California Geological Survey (CGS) (DOC 2023).

Soils

Based on a review of Natural Resource Conservation Service (NRCS) soil survey data, native soil at the Project site consists of the Yolo loam (calcareous substratum, 0 to 6 percent slopes) soil type (NRCS 2022).

A preliminary geotechnical investigation was prepared for the proposed Project, which included four soil borings in the developed portion of the Project site north of Dublin Creek (Cornerstone Earth Group [Cornerstone] 2022). The results of soil borings indicated that the near-surface soils consist of undocumented artificial fill consisting of clay with variable amounts of sand and gravel, and clayey sand with gravel, to depths ranging from 1.5 to 5 feet below the ground surface (bgs). Below the artificial fill, clay with sand and silt was present to the maximum soil boring depth of 40 feet bgs.

Paleontological Resources

The near-surface soils at the Project site consist of artificial fill material to depths ranging from 1.5 to 5 feet bgs (Cornerstone 2022). Native sediments at the Project site beneath the artificial fill consist of the late Miocene to early Pliocene-age Contra Costa Group, which includes the Orinda and Moraga Formations. The Contra Costa Group is comprised of nonmarine sedimentary rocks including sandstone, conglomerate, shale, and minor claystone, limestone, and tuff (Wagner et al. 1991).

A search of the University of California Museum of Paleontology (UCMP) database indicates there are over 40 recorded vertebrate fossil sites from within the Contra Costa Group (UCMP 2023). Most of these sites are in Contra Costa County; however, five of the sites are within Alameda County. The closest recorded vertebrate fossil site from within the Contra Costa Group is Bolenas Creek, approximately 6.5 miles northwest of the Project site (UCMP 2023).

Paleontological Sensitivity Analysis

A paleontologically sensitive geologic formation is one that is rated high for potential paleontological productivity (i.e., the recorded abundance and types of fossil specimens, and the number of previously recorded fossil sites) and is known to have produced unique, scientifically important fossils. Exposures of a specific geologic formation at any given Project site are most likely to yield fossil remains representing particular species or quantities similar to those previously recorded from that geologic formation in other locations. Therefore, the paleontological sensitivity determination of a rock formation is based primarily on the types and numbers of fossils that have been previously recorded from that formation.

In its standard guidelines for assessment and mitigation of adverse impacts on paleontological resources, the Society of Vertebrate Paleontology (SVP 2010) established four categories of sensitivity for paleontological resources: high, low, no, and undetermined. Areas where fossils have been previously found are considered to have a high sensitivity and a high potential to produce fossils. Areas that are not sedimentary in origin and that have not been known to produce fossils in the past typically are considered to have low sensitivity. Areas consisting of high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites) are considered to have no sensitivity. Areas that have not had any previous paleontological resource surveys or fossil finds are considered to be of undetermined sensitivity until surveys are performed. After reconnaissance surveys, a qualified paleontologist can determine whether the area of undetermined sensitivity should be categorized as having high, low, or no sensitivity. In keeping with the SVP significance criteria, all vertebrate fossils are generally categorized as being of potentially significant scientific value.

The near-surface artificial fill consists of materials that were excavated from another location, transported to the Project site, and then graded and compacted. During the excavation and subsequent construction process, any fossils that may have been present in the original materials would have been destroyed. Therefore, the artificial fill is not paleontologically sensitive.

Because of the large number of vertebrate fossils that have been recovered from the Contra Costa Group, it is considered to be of high paleontological sensitivity.

Regulatory Framework

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (PRC Sections 2621–2630) was passed in 1972 to reduce the hazard of surface faulting to structures designed for human occupancy. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed structures would not be constructed across active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Standards Code

The California Building Standards Code (CBC) (Title 24 of the California Code of Regulations) provides minimum standards for building design in California. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC) used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with numerous more detailed or more stringent regulations. The State earthquake protection law (California Health and Safety Code, Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by earthquakes. The CBC requires that any structure designed for a project site undergo a seismic design evaluation that assigns the structure to one of six categories, A–F; Category F structures require the most earthquake-resistant design. The CBC philosophy focuses on "collapse prevention," meaning that structures are to be designed to prevent collapse during the maximum level of ground shaking that could reasonably be expected to occur at a site. CBC Chapter 16 specifies exactly how each seismic-design category is to be determined on a site-specific basis, based on site-specific soil characteristics and proximity to potential seismic hazards. CBC Chapter 18 regulates the analysis of expansive soils, slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, along with an evaluation of lateral pressures on basement and retaining walls, liquefaction and loss of soil strength, and lateral movement or reduction of the foundation's soil-bearing capacity.

Dublin Municipal Code Section Chapter 7.16, Grading Regulations

The City of Dublin Grading Ordinance (Municipal Code Chapter 7.16) requires a geologic/soil investigation report, preliminary grading plans, proposed provisions for storm drainage control, and any existing or proposed flood control in the vicinity of the grading. A conceptual plan for erosion and sediment control is also required, including both temporary facilities and long-term site stabilization features such as planting or seeding for the area affected by the proposed grading. Chapter 7.16 prohibits grading operations during the rainy season except upon a clear demonstration, to the satisfaction of the Director of Public Works, that at no stage of the work will there be any substantial risk of increased sediment discharge from the site. Should grading be permitted during the rainy season, the smallest practicable area of erodible land must be exposed at any one time during grading operations and the time of exposure must be minimized.

City of Dublin General Plan

Chapter 8.0 of the City of Dublin General Plan outlines policies and programs related to seismic safety, safety and emergency preparedness. The following policies related to geology and soils are applicable to the proposed project:

- **Guiding Policy 8.2.1.A.1.** Geologic hazards shall be mitigated or development shall be located away from geologic hazards in order 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

    a. 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.

    b. 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.

Project Impacts and Mitigation Measures

(a) Seismic hazards (*No Impact to Less than Significant Impact*)

The impact from seismic hazards such as seismic ground shaking, liquefaction, lateral spreading, landslides and settlement would be less than significant. There would be no impact related to surface fault rupture as the Project site is not in an Alquist-Priolo Earthquake Fault Zone. See the Initial Study in Appendix A for the complete analysis.

(b) Erosion/topsoil loss (*Less than Significant*)

The Project applicant is required by law to prepare a SWPPP and implement site-specific BMPs specifically designed to prevent erosion. Furthermore, the Project applicant is required to implement the provisions of City Municipal Code Chapter 7.16, which require grading and drainage plans that identify measures to reduce erosion, and which generally prohibits grading activities during the winter rainy season. Therefore, impacts from construction-related soil erosion would be **less than significant**. See the Initial Study in Appendix A for the complete analysis.

(c-d) Soil stability (*Less Than Significant Impact*)

Design review performed through the City's permitting process would ensure compliance with the requirements of the CBC and the City's building standards. Therefore, because the Project

would implement measures to comply with the CBC and the City's building standards, impacts from construction and operation related to unstable soils and soil expansion would be **less than significant**. See the Initial Study in Appendix A for the complete analysis.

(e) Soil capability to support wastewater disposal, including septic (*No Impact*)

The proposed Project would not require installation of a septic system or alternative wastewater disposal system; therefore, there would be no impact from Project construction or operation. See the Initial Study in Appendix A for the complete analysis.

(f) Unique geologic feature/paleontological resources (*No Impact to Less Than Significant With Mitigation*)

Unique Geologic Feature

A unique geologic feature consists of a major natural element that stands out in the landscape, such as a large and scenic river, gorge, waterfall, volcanic cinder cone, lava field, or glacier. There are no unique geologic features at the Project site or within the Project viewshed. Thus, there would be **no impact** to unique geologic features from Project construction or operation.

Paleontological Resources – Construction

As discussed previously, the Project site is composed of artificial fill to depths ranging from 1.5 to 5 feet, with native Contra Costa Group sediments below the fill. Most grading and earthmoving activities at the Project site would extend to a maximum depth of 2 to 3 feet below the ground surface, and therefore would generally be confined to the artificial fill material, which is not paleontologically sensitive. However, in areas where the artificial fill only extends to 1.5 feet, excavation and grading would encounter the native Contra Costa Group materials, which are of high paleontological sensitivity. Furthermore, excavation to a maximum depth of approximately 12 feet would occur at the proposed on-site stormwater drainage pumps, which would also encounter the paleontologically sensitive Contra Costa Group materials. Therefore, project-related earthmoving activities could result in accidental damage to, or destruction of unique paleontological resources, and this impact would be **potentially significant.**

Mitigation Measure GEO-1: Avoid Impacts to Unique Paleontological Resources.

To minimize the potential for destruction of or damage to previously unknown unique, scientifically important paleontological resources during earthmoving activities at the Project site, the Project applicant shall do the following:

- *Prior to the start of earthmoving activities, retain either a qualified archaeologist or paleontologist to inform all construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered.*

- *If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work within 50 feet of the find and notify the Project applicant and the City. The Project applicant shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan, based on SVP Guidelines. The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City (as the CEQA lead agency) to be necessary and feasible shall be implemented before construction activities can resume within 50 feet of the site where the paleontological resource or resources were discovered.*

Mitigation Measure GEO-1 would reduce potential impacts to unique paleontological resources because construction workers would be alerted to the possibility of encountering paleontological resources and, in the event that resources were discovered, construction would be halted, and fossil specimens would be recovered and recorded and would undergo appropriate curation. Therefore, with implementation of **Mitigation Measure GEO-1**, potential construction-related impacts to unique paleontological resources would be **less than significant with mitigation**.

Paleontological Resources – Operation

Because Project operation would not involve ground-disturbing activities, there would be **no impact** to unique paleontological resources.

Source(s)

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Jennings, C.W. and W.A. Bryant. 2010. *2010 Fault Activity Map of California*. Available: https://maps.conservation.ca.gov/cgs/fam/App/index.html. Accessed January 11, 2022.

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Section 6: Hazards and Hazardous Materials

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
6.	**HAZARDS AND HAZARDOUS MATERIALS. Would the project:**				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?				X
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g)	Expose people or structures, either directly or indirectly, 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?			X	

Environmental Setting

The Project site has been used since the 1960s as a research and development facility, which tests epoxy resins and composites primarily for aerospace and other applications. The laboratories were used for small-scale testing, while the building located south of the offices/laboratories (referred to by Hexcel as the “Hi Bay”) was used to test larger quantities of carbon fiber plates. Part of the research activities include testing prefabricated prototype

carbon fiber plates. The research activities include chemical testing and reactions of the carbon fiber plates, as well as climate or extreme condition testing of the plates including extreme heat, cold, pressure, and electrical conditions, and stress testing. A Phase I Environmental Site Assessment (ESA) was performed by Ardent Environmental Group (Ardent) in 2022. The main chemicals used at the site include petroleum oils and lubricants, non-chlorinated solvents, metals (such as chromium and aluminum), and acids. According to waste records and a 1994 chemical inventory, historical chemical uses included halogenated solvents, including 1,1,1-trichloroethane (1,1,1-TCA) and trichloroethene (TCE). Small containers of the different testing chemicals were stored in approximately 10 fire cabinets in a designated Hazardous Waste and Storage Area, while larger quantities of virgin chemicals and wastes were stored in 55-gallon drums in the Hazardous Waste and Storage Area. The following areas of concern were noted in the Phase I ESA (Ardent 2022).

- **Area of Chemical Use, Storage, and/or Handling.** Chemicals are used, stored, and/or handled in the laboratories (existing and historical), Hi Bay area, and within the hazardous waste and storage area of the site.
- **Former 500-Gallon Waste Chromic Acid Underground Storage Tank (UST, Abandoned In-Place in 1988).** This Underground Storage Tank (UST) was located immediately east of the Hi Bay portion of the building and was used to containerize waste acid wash reportedly consisting of deionized water, sulfuric acid, and sodium dichromate generated from the etching of aluminum panels. Soil and groundwater in the vicinity of this UST were investigated in the late 1980s under the direction and oversight of the Alameda County Department of Environmental Health (ACDEH). Laboratory results indicated no detectable to low concentrations of hexavalent chromium, trivalent chromium, and aluminum. Based on these results, ACDEH allowed Hexcel to abandon the UST in-place by filling the tank with a cement slurry.
- **Recently Removed 520-Gallon Waste Chromic Acid UST (2021).** This UST was formerly located immediately east of the on-site hazardous waste and storage area and accepted waste from accidental spills from this area. Floor drains in the hazardous waste and storage area directed any accidental spills of chemicals to the tank. The UST was removed in April 2021 under the direction and oversight of the ACDEH. Following removal, two soil samples were collected from within the UST excavation. Laboratory results indicated no detectable concentrations of total petroleum hydrocarbons, and no detectable to low concentrations of volatile organic compounds (VOCs), namely acetone, at levels that were well below federal and state thresholds. Based on these results, the ACDEH issued a No Further Action letter dated July 20, 2021.
- **Asbestos and Lead-Based Paint.** The eastern portion of the existing building was constructed in 1962, with subsequent additions over the years. Based on the age of the building, Ardent (2022) concluded that asbestos-containing materials (ACMs) and lead-based paint are likely present.

As part of the Phase I ESA, Ardent (2022) retained Environmental Database Report (EDR) to perform a search of federal, State, and tribal hazardous materials databases, and retained Antea Group to perform a review of identified hazardous materials sites near the Project site.

The database searches included those sites that are identified as part of the Cortese List. The Project is listed in the SWRCB's GeoTracker database as a Cleanup Program Site; however, cleanup program sites are not considered part of the Cortese List. No hazardous materials sites were determined to represent a hazard for the proposed Project (Ardent 2022).

Regulatory Framework

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) has the primary responsibility for developing and enforcing workplace safety regulations within California. The California Occupational Safety and Health Administration enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites. Cal/OSHA regulations also include requirements for protective clothing, training, and limits on exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead (CCR Title 8 Section 1532.1) and asbestos (CCR Title 8 Section 1529) investigation and abatement.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) implements the State's hazardous waste management program for the California Environmental Protection Agency. DTSC has the primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with DTSC, for the management of hazardous materials (including remediation) and the generation, transport, and disposal of hazardous waste under the authority of California's Hazardous Waste Control Law (California Health and Safety Code Section 25100, et seq.).

San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay RWQCB is authorized by the State Water Resources Control Board to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the San Francisco Bay RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened and to require remediation of the site, if necessary.

Hazardous Waste Transportation

Statutory requirements governing hazardous waste transportation in California are contained in the California Health and Safety Code, Division 20, Chapter 6.5, Articles 6.5, 6.6, and 13. Hazardous waste transporters must have a valid registration permit issued by DTSC. In addition, hazardous waste transporters must comply with a variety of other State and federal regulations, including the California Vehicle Code (CCR Title 13); California State Fire Marshal Regulations (CCR Title 19); U.S. Department of Transportation regulations (Title 49 Code of Federal Regulations); and USEPA regulations (Title 40 Code of Federal Regulations).

Bay Area Air Quality Management District

BAAQMD Regulation 11, Rule 2, adopted December 15, 1976, regulates hazardous pollutants from asbestos demolition, renovation, and manufacturing activities. The purpose of the rule is to control emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establish appropriate waste disposal procedures. The rule sets out specific procedures to be followed and methods for reducing hazards from asbestos-containing materials during such activities.

Senate Bill 1082 – California Environmental Protection Agency's Unified Program

In 1993, Senate Bill 1082 gave the California Environmental Protection Agency (CalEPA) the authority and responsibility to establish a unified hazardous waste and hazardous materials management and regulatory program, commonly referred to as the Unified Program. The Unified Program is overseen by CalEPA with support from DTSC, RWQCBs, the Office of Emergency Services (OES), and the State Fire Marshal. The purpose of this program is to consolidate and coordinate hazardous materials and hazardous waste programs, and to ensure that they are consistently implemented throughout the state. The Unified Program includes: Hazardous Materials Release Response Plans and Inventories (Business Plans), California Accidental Release Prevention Program, Underground Storage Tank Program, Aboveground Petroleum Storage Act Program, Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs, and California Uniform Fire Code Hazardous Material Management Plans and Hazardous Material Inventory Statements.

State law requires county and local agencies to implement the Unified Program. The agency in charge of implementing the program is called the Certified Unified Program Agency (CUPA). The Alameda County Department of Environmental Health is the designated CUPA for the county. In addition to the CUPA, other local agencies, such as the City of Dublin, help to implement the Unified Program.

City of Dublin General Plan

Section 8.3.4 of the General Plan outlines policies and programs related to hazards and hazardous materials. The following policies related to hazardous materials are applicable to the proposed Project:

- **Guiding Policy 8.3.4.1.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 8.3.4.1.A.2.** Minimize the risk of exposure to hazardous materials from contaminated sites.
- **Implementing Policy 8.3.4.1.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.

Project Impacts and Mitigation Measures

(a) Exposure to hazardous materials (Less than Significant Impact)

Since local, state and federal regulations will be complied with during project construction and operation, these impacts will be **less than significant**. See the Initial Study in Appendix A for the complete analysis.

(b) Upset/Accident (Less Than Significant with Mitigation Incorporated)

GeoTracker case no. T0600191495 for Hexcel Corporation was related to the former 500-gallon waste chromic acid UST that was abandoned in place in 1988 (discussed above in the Environmental Setting). The case was closed in 2008. Per the ACDEH, when this UST is encountered during demolition it can be removed and disposed of as construction debris (Ardent 2022).

With regards to the 520-gallon waste chromic acid UST that was removed in 2021, because contaminants in soil samples in the tank vicinity were very low (well below regulatory thresholds), the ACDEH issued a No Further Action letter. Thus, the very minor soil contamination does not represent a human health or environmental hazard.

Ardent (2022) recommended that a subsurface investigation should be completed in the vicinity of the on-site areas of chemical use, storage, and handling to assess whether a release has occurred. If soil or groundwater have been previously contaminated at levels that exceed regulatory thresholds, this would represent a significant human health and environmental hazard because excavation work would be required during construction that could release these hazardous materials. Furthermore, the demolition of the existing building could expose workers and the environment to hazardous materials such as lead paint and/or asbestos. Therefore, these construction-related impacts are considered **potentially significant**.

Mitigation Measure HAZMAT-1: Perform a Phase II Environmental Site Assessment.

- *Prior to the start of earthmoving activities at the Project site, the Project applicant shall retain the services of a qualified remediation firm to perform a Phase II Environmental Site Assessment (ESA). The Phase II ESA shall be limited to only those areas where chemical use, storage, and handling have previously occurred. Soil borings shall be obtained as part of the Phase II ESA, along with groundwater samples if necessary. The samples shall be submitted to a laboratory for environmental testing and the results shall be reported in the Phase II ESA, copies of which shall be provided to the Alameda County Department of Environmental Health (ACDEH) and the City of Dublin Building Department. If there are no detections of constituents of concern, or the amounts are below regulatory agency threshold levels, no further actions shall be required.*

- *If the results of laboratory analyses from the Phase II ESA demonstrate that constituents of concern are present at levels that exceed regulatory agency threshold levels, the Project applicant shall consult with ACDEH (and other regulatory agencies such as the SWRCB if necessary) regarding the necessary actions for remediation. All necessary remedial activities shall be completed by the Project applicant, with a certification by the lead agency with remedial oversight (e.g., ACDEH or SWRCB) that no further action is required, prior to the start of construction activities at the Project site.*

Mitigation Measure HAZMAT-2: Perform Sampling of Materials To Be Demolished.

Prior to demolition of any building in the project area, the building shall be sampled to determine if the building contains lead paint and/or asbestos. If either of the materials are determined to be present, they shall be handled and disposed of as a hazardous material and in compliance with all applicable local, state, and federal regulations.

Mitigation Measure HAZMAT-1 would reduce potential impacts from exposure to on-site hazardous materials because soil (and groundwater, if necessary) testing would be performed, and if contamination is found to be present, any necessary remediation would be completed prior to the start of Project-related earthmoving activities. Mitigation Measure HAZMAT-2 would sample materials before demolition would occur, and if hazardous materials such as lead paint and asbestos are to be found, the would be handled and disposed in compliance to applicable regulations. Therefore, with implementation of **Mitigation Measure HAZMAT-1 and HAZMAT-2**, potential construction-related impacts from accidental exposure to hazardous materials would be **less than significant with mitigation**.

Any use of hazardous materials during project operation would be required to comply with the manufacturer's labeling instructions and (if applicable) would be required to prepare Hazardous Materials Release Response Plans and Inventories (Business Plans) comply with the requirements of Hazardous Waste Generator (tiered permitting) Programs. Therefore, upset and accident conditions involving the release of hazardous materials into the environment during Project operation would be **less than significant** during project operation.

(c) Hazardous materials near schools (*No Impact*)

There are no K-12 schools within 0.5 mile of the Project site. Thus, Project construction and operation would result in **no impact** from handling of hazardous materials near a school. See Initial Study in Appendix A.

(d) Hazardous materials list (*No Impact*)

Because the Project site is not listed on the Cortese list, there would be **no impact**. See Initial Study in Appendix A.

(e) Proximity to a public airport (*No Impact*)

The Livermore Municipal Airport is approximately 6 miles east of the Project site and outside of the airport's Airport Influence Area (Alameda County 2012). Thus, Project construction and

operation would result in **no impact** from airport safety or noise hazards. See Initial Study in Appendix A.

(f) Impair implementation of an emergency response plan or emergency evacuation plan (*No Impact*)

All construction materials would be staged on-site, and therefore no temporary lane closures along Dublin Boulevard would be required during Project construction that could impede emergency access or hinder emergency evacuation. For Project operation, planned emergency access throughout the Project site would be reviewed by the City of Dublin Building Department and the Fire Department to ensure that appropriate widths and turning radii area are provided for emergency vehicles. Thus, Project construction and operation would result in **no impact** from impairment of emergency response or evacuation plans. See Initial Study in Appendix A.

(g) Expose people or structures to wildland fires (Less Than Significant Impact)

The proposed building would be constructed according to CBC, the California Fire Code and City of Dublin codes, and ordinances and regulations to minimize fire hazards, including fire prevention and suppression measures; fire hydrants and sprinkler systems; emergency access; and other similar requirements. Therefore, impacts would be **less than significant**. See Initial Study in Appendix A.

Source(s)

Alameda County. 2012. Livermore Executive Airport. Airport Land Use Compatibility Plan.

Ardent Environmental Group, Inc. 2022. Phase I Environmental Site Assessment, Hexcel Corporation Facility, 11711 Dublin Boulevard, Dublin, California. Ardent Project No. 101327001.

State Water Resources Control Board (SWRCB). 2023. GeoTracker. Available: https://geotracker.waterboards.ca.gov/. Accessed January 17, 2023.

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Section 7: Tribal Cultural Resources

ENVIRONMENTAL IMPACTS Issues	Significant and Unavoidable Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
7. 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:				
a) 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				X
b) 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 I 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.		X		

The analysis in this section considers impacts to tribal cultural resources associated with the implementation of the proposed Project. This section includes a brief summary of available ethnographic background information, the results of consultation with two California Native American tribes that are traditionally and culturally affiliated with the proposed Project area, and the Project's potential impacts on tribal cultural resources.

Environmental Setting

The Project site is located in the Amador Valley, along the north bank of Dublin Creek. The modern address is 11711 Dublin Boulevard, located in the City of Dublin, Alameda County, California. The property is approximately 8.81 acres. The project site is located within the Dublin Village Historic Area Specific Plan, with the Dublin Heritage Park and Museums and Dublin Pioneer Cemetery to the east; I-580 to the south; and a business park to the west. Dublin Creek borders the north side of the property.

Ethnographic Context

The project area is within the tribal territory of the Chochenyo Ohlone (Milliken et al. 2007). The Ohlone are a linguistically defined group, comprised of several autonomous groups that spoke at least eight different but related languages. The territory of the Ohlone people extends along the coast from the San Francisco Bay to the Big Sur River and 50 to 60 miles east,

including the valleys that make up the Tri-Valley area, where the City of Dublin is now located (Levy 1978:485–486).

At the time of contact, the Ohlone were semi-sedentary hunters and gatherers. Controlled burning was regularly conducted to modify the landscape and optimize resource production. The Ohlone used tule balsas for watercraft, and bows and arrows, cordage, and bone and groundstone tools to procure and process foodstuffs. They hunted terrestrial game, such as mule deer, tule elk, and pronghorn antelope. Traps were set for smaller game, such as rabbit and quail. Grasshoppers and other insect foods were collected during group drives. Waterfowl were a very important part of the diet and were trapped along the tidal marshes. Freshwater fish and marine resources, such as salmon, steelhead, school fish, shellfish, and kelp, were harvested and traded. Plant foods were also very important, including acorns, buckeyes, nuts, seeds, roots, tubers, berries, and fruits (Levy 1978:491-493, Lightfoot and Parrish 2009).

The Ohlone were politically organized in autonomous, extended communities of approximately 200 to 400 people, each having a designated territory. Each group typically included three to five semi-permanent villages (Milliken et al. 2007). Kroeber referred to these groups as “tribelets” (Kroeber 1925). At the time of contact, the Pelnen Tribe lived in the western Livermore Valley, in the area of Pleasanton and south Dublin. The Seunen Tribe lived in north Dublin, up to the San Ramon area (Milliken 1995). Both the Pelnen and Seunen are part of the larger Chochenyo Ohlone linguistic group (Milliken et al. 2007).

Despite independent governance, these “triblets” were a network for trade and were often interlinked by marriage. The role of chief could be held by a man or a woman. Duties of the chief included providing for visitors, directing ceremonial activities, and leading fishing, hunting, gathering, and warfare expeditions. The chief served as the leader of a council of elders, who were advisors to the community (Levy 1978).

Ohlone villages in the Late Period included domed houses with central hearths, thatched with tule, grass, or other vegetal material and bound with strong, flexible willow branches. Permanent settlements were usually placed on high ground. Sweathouses were built along streambanks, and were semi-subterranean with a thatched domed roof. Dance houses were large, circular or oval domed structures, also with thatched walls and roof. Villages also typically included an assembly house which was large enough to accommodate all the inhabitants of the village (Levy 1978).

Regulatory Framework

Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects, with cultural value to a California Native American tribe, that are also included in or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources. (PRC 21074 (a)(1)). Tribal cultural resources may also be resources that are determined by a lead agency such as the City of Dublin, in its discretion and supported by substantial evidence, to be significant pursuant to the historical register criteria. (PRC 21074 (a)(2), citing (PRC 5024.1). In those cases, the lead agency

considers the significance of the resource to a California Native American tribe in making its determination. Tribal cultural resources may contain physical cultural items or may be places or contributing elements within a tribal cultural resources landscape, such as gathering places, sacred sites, landscape features, culturally significant plants, or other locations that are related to the religious and cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living tribal community. This category of resources under CEQA recognizes that tribes may have unique knowledge, expertise, and information about tribal cultural resources that are important to the self-identity of tribal nations that can only be identified by the relevant tribe, thus requiring consultation under CEQA pursuant to Assembly Bill (AB) 52. Historical resources, unique archaeological resources, or non-unique archaeological resources may also be tribal cultural resources if they meet the criteria of PRC 21074.

State

California Environmental Quality Act ("CEQA")

California Environmental Quality Act (CEQA) requires lead agencies to consider whether projects would impact tribal cultural resources as a separate category of environmental analysis. Tribal cultural resources may or may not also be archaeological or historical resources. For clarity, archaeological and historical resources are addressed in the cultural resources chapter. In some cases, tribal cultural resources are viewsheds, cultural landscapes, plant gathering areas, or other sacred spaces that are not readily identifiable to people outside of the Tribe. In many cases, tribal cultural resources also include an archaeological component, such as artifacts, features, and sites (with or without human remains). PRC section 21074 states the following:

a) "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.
    (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. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource"

as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Section 7050.5b). PRC sections 5097.94 and 5097.98 also outline the process to be followed in the event that human remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California NAHC within 24 hours (Section 7050.5c). The NAHC is responsible for the notification of the MLD. With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposition of, with appropriate dignity, the Native American human remains, and any cultural or funerary items associated with Native American people.

Assembly Bill 52

AB 52 (effective July 1, 2015) added PRC sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to CEQA, relating to consultation with California Native American tribes, consideration of tribal cultural resources, and confidentiality. AB 52 provides procedural and substantive requirements for lead agency consultation with California Native American tribes and consideration of impacts on tribal cultural resources, as well as examples of mitigation measures to avoid or minimize impacts to tribal cultural resources. AB 52 establishes that if a project may cause a substantial adverse change in the significance of a tribal cultural resource, that project may have a significant effect on the environment. Lead agencies must avoid damaging impacts to tribal cultural resources, when feasible, and shall keep information submitted by tribes confidential unless the information is deemed publicly available by the tribe.

AB 52 requires a lead agency to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation. Section 21080.3.1(d) states that within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency's contact information, and a notification that the California Native American tribe has 30 days to request consultation.

Previous CEQA Documents

The City of Dublin hired the archaeological firm WSA in 2003 to prepare an Archaeological Assessment Report of the Donlon Way Specific Plan (later renamed the Dublin Village Historic Area Specific Plan area). A record search at the NWIC, conducted by WSA, did not identify any previously recorded archaeological sites within the Specific Plan area boundaries, but one new archaeological site was recorded during the pedestrian survey and Archeological High Probability areas were also identified within the Specific Plan area boundaries. The Archaeological Assessment Report concluded that there is a moderate-to-high-probability of identifying Native American archeological resources within the Specific Plan area boundaries.

The City of Dublin hired the architectural firm Page & Turnbull, Inc. in 2003 to prepare the Dublin Historic Resources Identification Project that was finalized in 2004. The city contracted with Page & Turnbull to identify and map historic resources in an approximately 38-acre area for a future Specific Plan for the Donlon Way area (later renamed the Dublin Village Historic Area Specific Plan) and to prepare preservation recommendations. Page & Turnbull prepared a historic context of the Dublin Village area and recorded all of the properties in the survey area on DPR 523 A and B forms.

The Dublin Village Historic Area Specific Plan was adopted by the Dublin City Council on August 1, 2006 under Resolution No. 149-06 and relied on the findings of the Archaeological Assessment Report of the Donlon Way Specific Plan and the Dublin Historic Resources Identification Project. The approximately 38-acre Specific Plan area included the two project site parcels. Subsequently, three Specific Plan addendum and amendments have been prepared for the Specific Plan. City Council determined that no new significant impacts were identified by the addendums or amendments, and no further environmental analysis was required.

Context for Project Impacts and Mitigation Measures

The impact analysis for tribal cultural resources for this proposed Project is based on government-to-government consultation with the City of Dublin and the Confederated Villages of Lisjan and Ione Band of Miwok Indians tribes, both of whom had previously requested notification about projects within the City of Dublin, pursuant to AB 52. Additionally, the results of the records search and archaeological field survey were considered to help establish whether tribal cultural resources may be present in the proposed Project area and if so, if they would be impacted by Project development and implementation. The analysis is also informed by the provisions and requirements of federal and state laws and regulations that apply to tribal cultural resources. This section includes the thresholds of significance used in evaluating the impacts, the methods used in conducting the analysis, and the evaluation of proposed Project impacts. If significant impacts are identified, then appropriate mitigation measures are provided.

Methods

A records search was conducted on December 20, 2022, at the California Historical Resources Information System's NWIC in Rohnert Park, California to identify updates to previously

completed cultural resources reports or studies within a 0.25-mile radius of the proposed Project site. No tribal cultural resources or pre-contact archaeological resources were identified by the records search within the proposed Project site or within the 0.25-mile search buffer.

An archaeological survey of the proposed Project site was conducted on December 16, 2022, by AECOM Archaeologist Karen Gardner. The survey focused on unpaved areas of proposed disturbance, to determine if pre-European contact, surficial resources (e.g., dark midden soils, processed shell or bone, lithics, or groundstone artifacts) were present. The backdirt of animal burrows was also examined for cultural constituents. No pre-European contact cultural resources were identified by the archaeological survey.

Consultation with California Native American Tribes

AB 52 provides procedural and substantive requirements for lead agency consultation with California Native American tribes and consideration of impacts on tribal cultural resources, as well as examples of mitigation measures to avoid or minimize impacts to tribal cultural resources. Conducting consultation early in the CEQA process allows Tribal Governments and lead agencies to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. The intent of consultation is to provide an opportunity for interested California Native American Tribal Governments to work together with the City of Dublin during the proposed Project planning process to identify, avoid, protect and mitigate impacts to tribal cultural resources.

On April 10, 2023, the City of Dublin sent inquiry letters to the following Native American Tribal Governments, who had previously requested notification about projects in the City of Dublin, pursuant to AB 52:

- The Confederated Villages of Lisjan
- The Ione Band of Miwuk Indians

Neither tribe responded to the invitation to consultation on tribal cultural resources.

Thresholds of Significance

The significance criteria used to evaluate a Project's impacts to tribal cultural resources under CEQA are based on Appendix G of the CEQA Guidelines, commonly known as the Initial Study Checklist. An impact is considered significant if development under the proposed Project would result in one or more of the following conditions:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC § 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 PRC § 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 PRC § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Project Impacts and Mitigation

(a) Listed or eligible for listing in the California Register of Historical Resources (*No Impact*)

On December 7, 2022, AECOM sent a request to the NAHC for a search of the Sacred Lands File, asking if there was any record of traditional cultural resources within the project area. On December 13, 2022, a response was received from the NAHC, indicating that the search had negative results.

No listed Tribal Cultural Resources are within the Project Area of Potential Effects (APE)[1], therefore there will be **no impact** to listed Tribal Cultural Resources, as discussed in the Initial Study in Appendix A.

(b) Significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 (*Less Than Significant With Mitigation Incorporated*)

The proposed Project would include excavation of the parking lot to the south of the Hexcel Corporation R&D facility, which is adjacent to the marked boundary of the Pioneer Cemetery. Marked grave sites in the cemetery are within five feet of the Hexcel property fence. Historic documents suggest that the cemetery was larger than the currently marked boundary (Freudenhem 1977). Additionally, there is anecdotal evidence that the cemetery location was first used by the Ohlone, and may also include burials of Native American and Mexican farm laborers who worked for Jose Maria Amador, interred prior to formal consecration of the cemetery in 1859 (VerPlanck 2003). It is likely that the cemetery extends beneath the Hexcel parking lot, and possible that the cemetery includes Native American human remains. If so, the impact to Tribal Cultural Resources would be **potentially significant** during earthmoving and excavation activities to implement the Project.

Mitigation Measure TR-1: Inadvertent/Unanticipated Tribal Cultural Resources Discovery Protocols

The City of Dublin shall require the following steps to be taken, including as a part of all contracts related to construction of the Project, as applicable:

[1] The APE means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.

A. Prior to the start of ground disturbing activities, the applicant shall retain representatives from consulting tribe(s), if available, to implement Tribal Cultural Resources Sensitivity Training for all construction personnel involved with ground disturbing or excavation activities. The training shall include information regarding the possibility of encountering buried tribal cultural resources, the appearance and types of tribal cultural resources that could potentially be seen during construction, notification procedures, and proper protocols to be followed should suspected or confirmed tribal cultural resources be encountered. This training shall be provided once to each worker involved in ground-disturbing activities before they begin work and shall be documented in training records.

B. If tribal cultural resources or potential tribal cultural resources are discovered during Project implementation, all activity within a 50-foot radius of the find shall be stopped, the City of Dublin's Project Manager shall be notified, and Tribal Representatives from the consulting tribe(s) shall be immediately notified. The Tribal Representative(s) shall evaluate the find(s) within 48 hours to determine if it meets the definition of a tribal cultural resource (PRC §21074) and follow the procedures outlined below:

   i. If the find(s) does not meet the definition of a tribal cultural resource, no further study or protection is necessary prior to resuming Project implementation (but see Mitigation Measures CUL-3 and CUL-4)

   ii. If the find(s) does meet the definition of a tribal cultural resource, then it shall be avoided by Project activities and preserved in place. The contractor shall implement any measures deemed by the City of Dublin to be necessary and feasible to preserve in place, avoid, or minimize impacts to the tribal cultural resource. If avoidance is not feasible, as determined by the City of Dublin, Tribal Representatives from the consulting tribe(s) if available, shall make recommendations regarding the culturally appropriate treatment and disposition of such find(s) and significant impacts to such tribal cultural resources shall be mitigated in accordance with the recommendations of the consulting tribe(s), if they are available, prior to resuming construction activities within the 50-foot radius.

   iii. If the find meets the definition of both a tribal cultural resource and a historical or unique archaeological resource, then it shall be treated in accordance with the measures described in Section C. below and Mitigation Measure CUL-4.

C. Culturally appropriate treatment may include, but is not limited to, minimal processing of materials for reburial, minimizing handling of tribal cultural resources objects, leaving objects in place within the landscape, or returning tribal cultural resources objects to a location within the Project area where they would not be subject to future disturbance. No cultural soil maybe removed from the Project site.

Permanent curation, testing, or data collection of tribal cultural resources will not take place unless requested in writing by the consulting tribe(s).

D. All fill soils imported and used for this Project must be clean, engineered fill.

E. The applicant shall enter into a tribal monitoring agreement with the consulting tribe(s) prior to the start of ground disturbing activities. The tribal monitoring agreement shall form the terms and compensation for the tribal monitoring with the consulting tribe(s) and be utilized in combination with the tribal cultural resource treatment. Tribal Monitors have the authority to identify sites or objects of cultural significance and to request, upon the finding of a potential tribal cultural resource, that work be slowed, diverted, or stopped if such sites or objects are identified within the direct impact area. Only the consulting tribe(s) can recommend culturally appropriate treatment of such sites or objects, via their Tribal Monitor. Work within 50 feet of the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of the tribal monitoring agreement have been implemented.

Regarding human remains, as described above, the adjacent Pioneer Cemetery likely extends beyond the currently marked property boundary into the Hexcel lot to the west. There is anecdotal evidence that the cemetery location was first used by the Ohlone, and may also include burials of Native American and Mexican farm laborers who worked for Jose Maria Amador, interred prior to formal consecration of the cemetery in 1859 (VerPlanck 2003). Therefore, human remains are likely to be encountered. Project implementation would involve tree and vegetation removal, grading, trenching, undergrounding of utilities, and potentially other earthmoving activities. In the event that human remains are discovered during ground-disturbing activities, they could be inadvertently damaged. This impact would be **potentially significant**.

If human remains are found during Project implementation, the State of California Health and Safety Code section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to PRC section 5097.98. In the event of an unanticipated discovery of human remains, the Alameda County Coroner must be notified immediately. If the human remains are determined to be Native American, the coroner is required to notify the NAHC, which would determine and notify a most likely descendant (MLD) within 24 hours. The MLD must complete the inspection of the site within 48 hours of notification and may recommend scientific removal and non-destructive analysis of Native American human remains and items associated with Native American burials.

Significance after Mitigation

With the incorporation of Mitigation Measure TR-1 and adherence to State regulations, any tribal cultural resources encountered during construction would be treated in a culturally appropriate manner in consultation with Tribal Representatives, and the impact to tribal cultural resources would be **less than significant with mitigation**.

In regards to human remains, compliance with California Health and Safety Code section 7050.5 and California PRC would reduce potential impacts on previously undiscovered human remains. Implementing this mitigation measure ensures that any potential human remains encountered during construction would be treated in an appropriate manner under CEQA and other applicable laws and regulations. By providing consultation with the MLD, this impact would be reduced to a **less than significant** level.

Source(s)

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Other CEQA Considerations

Cumulative Context

Cumulative impacts do not refer to project-related impacts, but to the impacts of a proposed project when considered with the impacts of past, present, and probable future projects producing related impacts, as required by Section 15130 of the CEQA Guidelines. Other past, present, and future projects that would contribute to environmental impacts of the proposed project are referred to as "related projects."

As stated in CEQA Section 21083(b)(2), a project may have a significant effect on the environment if "its effects are individually limited but cumulatively considerable." According to the CEQA Guidelines Section 15355:

"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

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

In addition, as per the CEQA Guidelines: "The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable."

The analysis in this section includes:

- A determination of whether the long-term impacts of all related past, present, and future plans and projects would cause a cumulatively significant impact; and
- A determination as to whether implementation of the proposed project would have a "cumulatively considerable" contribution to any significant cumulative impact. (See CEQA Guidelines Sections 15130[a]-[b], Section 15355[b], Section 15064[h], and Section 15065[c]).

In other words, the required analysis intends to first create a broad context through which to assess the project's incremental contribution to anticipated cumulative impacts, viewed on a geographic scale well beyond the proposed project itself, and then to determine whether the project's incremental contribution to any significant cumulative impacts from all related projects is itself significant (i.e., "cumulatively considerable" according to CEQA).

Cumulative Impact Analysis

The City's Development Project website and map provides a snapshot of projects that are at various stages of the development process around the limits (City of Dublin 2023). All proposed, recently constructed or foreseeable projects in the City that would contribute to cumulative impacts related to air quality, biological resources, cultural resources, energy, geology and soils (paleontological resources), hazards and hazardous materials and tribal resources are identified in Table 8: Cumulative Projects in the City of Dublin below. 26 cumulative projects were identified in the City.

The Project's potential impacts, with respect to air quality, could extend beyond the Project area to potentially combine with impacts from the other projects listed in Table 8: Cumulative Projects in the City of Dublin. This is because air pollutants are emitted into the atmosphere and drift to other locations, which can increase pollutant levels in those areas. Nonetheless, the BAAQMD considered the emission levels at which a Project's individual emissions would be cumulatively considerable in developing its CEQA significance thresholds. The BAAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. As discussed in the Air Quality section of this EIR, the Project's emissions would be below the BAAQMD cumulatively considerable thresholds. Furthermore, **Mitigation Measure AQ-1: Implement Basic Construction Emission Control Practices** would be implemented in compliance with the BAAQMD threshold for fugitive dust emissions (PM_{10} and $PM_{2.5}$) during construction. During operation, the proposed Project would result in a net reduction of emissions compared to existing conditions for NOx, PM_{10}, and $PM_{2.5}$, and ROG emissions would not exceed the BAAQMD thresholds of significance. Because the emissions would be minimized during construction with mitigation incorporated and reduced during operation, the Project would not result in substantial cumulative impacts and the impact would be **less than significant with mitigation**.

With respect to biological resources, a significant cumulative impact could occur if other cumulative projects identified in Table 8 would affect the same biological resources as the Project (e.g., nesting birds and roosting bats).

The cumulative projects that may result in potential impacts to nesting birds would be subject to applicable federal, state, regional, and local regulations discussed previously in Section 2, including the Endangered Species Act and Migratory Bird Treaty Act, and, therefore, would also be required to implement typical nesting bird avoidance measures, similar to those described for the Project in mitigation measure BIO-1. Because these standard avoidance measures would reduce the impacts of all cumulative projects, the overall cumulative impact to nesting birds in the City would be **less than significant**.

Because common bat species are not protected by other regulations such as the Endangered Species Act, it is possible that some cumulative projects could include removal of trees or structures that are used as bat roosting habitat without appropriate precautions being taken to prevent bat mortality. The overall cumulative impact could be **potentially significant**. However,

because the Project would include mitigation measure BIO-2 to avoid bat mortality, the Project's contribution to the cumulative impact would be **less than cumulatively considerable with mitigation**.

The Project could contribute to cumulative impacts on cultural resources and tribal resources, if projects listed in Table 8: Cumulative Projects in the City of Dublin also contributed to a substantial loss of historical and tribal resources in the City. As described in Section 3, Cultural Resources, the Project would result in the complete demolition of the existing Hexcel Corporation R&D facility, which is a historical resource as defined in CEQA Guidelines section 15064.5. This would be a significant and unavoidable impact. However, none of the other projects listed in Table 8: Cumulative Projects in the City of Dublin would result in the loss of a historical resource; therefore, the overall cumulative impact to historical resources in the City would be less than significant.

As discussed in Sections 3 and 7, Cultural Resources and Tribal Cultural Resources, respectively, based on the existence of the archeological resources within and adjacent to the Project area, there is a moderate to high probability of identifying Native American archeological resources and a high probability of encountering historic-period archeological resources in the vicinity of the Pioneer Cemetery and Dublin Creek. With the implementation of **Mitigation Measures CUL-3 through CUL-4**, impacts to these resources would be less than significant with mitigation. Therefore, the contribution of the Project to cumulative projects would be minimal and cumulative impacts are expected to be less than significant related to these resources.

With respect to energy resources, the geographic context for cumulative energy impacts is the state of California, as standards for energy efficiency are promulgated at the state level. Past, present, and probable future projects throughout the state would result in the irreversible use of diesel and gasoline resources during construction, as well as the incremental increase in energy consumption from operational building energy and traffic associated with those projects. However, the use of such resources would be subject to the same regulatory framework relating to energy and fuel efficiency as the Project and would be anticipated to become more energy efficient over time as regulatory requirements change and technological advancements are made. Due to the urbanized nature of the City, future projects are expected to result in a similar development pattern—while the overall use of electricity and natural gas on the site and surrounding areas may increase, the energy use per square foot is expected to decrease due to compliance with modern standards and incorporation of modern technologies and design standards. Specifically, regarding petroleum use during construction, the Project and other future projects would consume energy associated with the off-road equipment, truck trips, and worker vehicle trips. However, construction of the Project and future projects would be temporary, and compliance with increasingly stringent local and state regulations for fleet efficiency, and construction best practices limiting vehicle idling would help reduce construction-related fuel usage. During operation of the Project and future projects, increased land use intensity would result in additional vehicles miles traveled in the area. However, over the lifetime of the Project and past, present, and future projects, the fuel efficiency of vehicles is expected to increase. Similarly, with increasingly stringent local and state regulations for

energy efficiency in buildings, such as Title 24 of the California Administrative Code and the Appliance Efficiency Regulations, operational building energy consumption is also expected to decrease. Therefore, the overall cumulative impact relating to energy consumption and consistency with energy plans would be **less than significant.**

Impacts from the Project relating to hazardous materials could also potentially cause offsite impacts that could potentially combine with impacts from other past, present or foreseeable future projects. Impact could result from the release of hazardous materials into the environment such as the soil and water during demolition and construction activities. If this release was to cause widespread contamination to areas in addition to contamination from cumulative projects, the Project could result in significant cumulative impacts. However, with the implementation of **Mitigation Measure HAZMAT-1: Perform a Phase II Environmental Site Assessment**, the potential for existing contamination at the site would be investigated, and if present at levels exceeding regulatory agency thresholds, would be remediated under the oversight of the appropriate agency. Such remediation actions, if necessary, would take into account both on- and off-site receptors and potential for cumulative impacts with other nearby projects or other contaminated sites. Furthermore, all cumulative projects, including the proposed Project, are required to comply with local, state, and federal regulations for transport, use, disposal, and accidental release of hazardous materials, which would address impacts associated with both construction- and operation-related handling of hazardous materials. Although compliance with applicable regulations would not completely remove the potential for accidental releases, it would reduce the likelihood of such a spill and would generally mean that any spill would be limited in size and/or spread. Therefore, the effect of such incidents would not likely be additive to effects from other, similar incidents occurring elsewhere on different project sites. Application of these regulations is mandatory; therefore, cumulative impacts related to hazardous materials are expected to be **less than significant.**

With respect to paleontological resources, due to the large number of vertebrate fossils that have been recovered from the Contra Costa Group, it is considered to be of high paleontological sensitivity. Therefore, earthmoving activities associated with the projects considered in this cumulative analysis could damage or destroy unique paleontological resources that may be present in these rock formations, and potentially within other paleontologically sensitive formations as well, if those projects do not include appropriate paleontological resource avoidance measures. Therefore, the overall cumulative impact to paleontological resources could be **potentially significant**. Implementation of **Mitigation Measure GEO-1: Avoid Impacts to Unique Paleontological Resources** would reduce the potential of the proposed Project to directly impact paleontological resources and, if resources are encountered during construction, would require measures to ensure that any fossil specimens are recovered and recorded and undergo appropriate curation. Therefore, the Project's contribution to the overall cumulative impact would be **less than cumulatively considerable with mitigation.**

Table 8: Cumulative Projects in the City of Dublin

Name	Description	Location (Distance from Project Site)	Land Use	Status
BASIS Independent School	Construct façade improvements to existing construct façade improvements to the existing 81,985 square foot office building which will be converted to a school, and construct a 9,134 square foot gymnasium building, outdoor recreational play field, trash enclosure, and associated site improvements that would serve up to 800 middle and high school students	7950 Dublin Blvd. (1,660 feet)	School	Approved. Awaiting building permit submittal
Francis Ranch (East Ranch)	Development of a 573-unit residential project, 11.5 acres of public parks, a 2.6-acre, two-acre Semi-Public Site	4038 Croak Rd. (5.6 miles)	Residential	Approved. The building permit is currently under review. Grading permits issued.
Downtown Hines North	Demolition of the two existing commercial buildings totaling 35,427 square feet and construction of a new 34,995 square foot multi-tenant commercial building	7200 Amador Plaza Rd. (3,630 feet)	Commercial	Application under review
Dublin Fallon 580	Vesting Tentative Tract Map to subdivide the 192-acre parcel, Planned Development Rezone and Development Agreement. 238 units and up to 4,400,605 square feet of General Commercial/Campus Office uses.	Corner of Croak Road and Future Central Pkwy. (5.5 miles)	Subdivision that could lead to future residential, commercial, public development	Application under review. NOTE: No SDR, so no timing on construction.
Quarry Lane School – Performing Arts Center	Construct a new 13,800-square foot building comprised of a performing arts center and other support spaces, including a new parking lot, immediately south of the existing Quarry Lane School facilities	6237 Tassajara Rd. (2 miles)	School	Application under review
The Whitford of Dublin (Dublin Senior Living)	152-unit senior living project consisting of 114 assisted living units, 38 memory care units and 174 beds	5751 Arnold Rd. (2.8 miles)	Commercial	Approved. The sitework permit and building permit are currently under review

Name	Description	Location (Distance from Project Site)	Land Use	Status
Grafton Plaza Daycare & Retail (Tivoli Plaza)	Construct three commercial buildings with a total of 31,860 square feet (sf), including two retail buildings (16,038 sf and 6,055 sf) and one daycare building (9,767 sf) on a 3.68-acre site	Corner of Grafton St. and Dublin Blvd. (4 miles)	Commercial	Constructed
Ashton at Dublin Station	Construct a 220-unit apartment community and related amenities which include a fitness center, pool, roof top lounge, and 331 structured parking spaces	DeMarcus Blvd. (2 miles)	Residential	Constructed
Regional Street Senior Affordable Housing	Senior affordable housing project with 113 units	6541 Regional St. (2,540 feet)	Residential	Approved. The sitework permit and building permit are currently under review
H Mart Supermarket	An expansion to an existing 27,237 square foot commercial tenant space to construct an 8,552 square foot addition for a food hall, 3,187 square foot outdoor seating area with play area, façade modifications, new trash enclosure and related site improvements and repaint the existing warehouse building	7884 Dublin Blvd. (2,900 feet)	Commercial	Approved. The building permit is currently under review.
Inspiration Drive Assisted Living	Construct an assisted living facility of 84 beds on Parcel 3 of the Valley Christian Center property.	7500 Inspiration Dr. (3,700 feet)	Commercial	Approved. Awaiting building permit submittal
Avalon West (St. Patrick Way)	Construction of a 499-unit residential apartment complex.	6700 Golden Gate Dr. (2,890 feet)	Residential	Under construction
The Dublin Center “The DC” Plus SCS	Mix-use development on 54-acres of the SCS Dublin site. 650 units and up to 265,000 sf of commercial	Between Brannigan St. and Tassajara Rd. (4 miles)	Commercial and residential	Application under review
Righetti Property	Establish zoning regulations and development standard for future development of up to 96 homes, approximately 372,350 square feet of industrial uses and approximately 321,125 square feet of campus office/light industrial	Collier Canyon Rd. (5 miles)	Planned residential and light industrial development	Application under review. NOTE: No SDR, so no timing on construction.

Name	Description	Location (Distance from Project Site)	Land Use	Status
	uses. The proposed project would also subdivide the 49.6-acre site into four parcels to accommodate proposed residential and industrial development.			
Branaugh Property	PD Rezone, Tentative Map and Development Agreement for 78-97 units and approximately 527,773 square feet of industrial development	1881 Collier Canyon Rd. (5 miles)	Residential and industrial	Approved. No SDR, so no timing on construction.
Kaiser Commercial – Nissan	Construct a Nissan auto dealership	Corner of Dublin Blvd. and Keegan St. (4.4 miles)	Commercial	Under construction
Inspiration Drive Memory Care	Construct a 35,089 square foot memory care facility consisting of 55-beds	7500 Inspiration Dr. (3,740 feet)	Commercial	Approved. Awaiting building permit submittal
Infiniti Dealership	Construct a 10,461 square foot Infiniti automobile showroom and service center	3200 Dublin Blvd. (4.6 miles)	Commercial	Under construction
Hacienda Crossings Drive-Through Restaurant (Chick-fil-A)	Demolition of an existing building and construction of a new 2,781-square-foot drive-through restaurant and related site improvements	4814 Dublin Blvd. (3 miles)	Commercial	Application under review
Amador Station	Development of an affordable housing project consisting of up to 300 affordable units	6501 Golden Gate Dr. (4,000 feet)	Residential	Approved. Awaiting sitework permit and building permit submittal
Schaefer Ranch Unit 3	Proposal results in a total of 418 homes (a net increase of 12 homes) within the Schaefer Ranch project	9595 Dublin Blvd. (1 mile)	Residential	Constructed
Moller Ranch/Tassajara Hills	Construct 370 single family detached dwellings and a private clubhouse on 80 acres	6861 Tassajara Road (4.7 miles)	Residential	Constructed
Boulevard (Dublin Crossing)	Development of approximately 1,753 single and multi-family residential units	Corner of Dublin Blvd. and Scarlett Dr. (1.9 miles)	Residential	Under construction

Name	Description	Location (Distance from Project Site)	Land Use	Status
McDonald's SDR	Demolition of existing McDonald's restaurant, and construction of anew 4,394 sf building	7145 Dublin Blvd. (5,000 feet)	Commercial	Application under review
Dublin Transit Center Parking Garage	Construct parking garage with a capacity approximately 500 parking spaces	Campus Dr. (2.5 miles)	Parking	Under construction
Nissan Commercial Car Wash	Construct a 3,574 square foot self-service car wash	3200 Dublin Blvd. (4 miles)	Commercial	Approved. The building permit is currently under review

Notes
DC = Dublin Center, SCS = name of developer, SDR = site development review, sf-= square feet

Growth Context

The CEQA Guidelines (Section 15126.2[d]) requires an examination of the direct and indirect impacts of the proposed project, including the potential of the project to induce growth leading to changes in land use patterns and population densities and related impacts on environmental resources.

Direct growth-inducement would result if a project involved construction of new housing. Indirect growth-inducement would result, for instance, if implementing a project resulted in any of the following:

- Substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- A construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; or,
- Removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area) or adding development adjacent to undeveloped land.

Growth-inducement itself is not an environmental effect, but it may foreseeably lead to environmental effects. These environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, or conversion of agricultural and open space land to urban uses.

Growth Inducing Analysis

The proposed Project would not directly or indirectly induce unplanned population growth in the City of Dublin, as discussed in Section 13, Population and Housing of the Initial Study (Appendix A). Project construction activities would generate temporary and short-term employment, but these construction jobs are anticipated to be filled from the existing local employment pool. The number of onsite workers would vary depending on the construction phase, but it is anticipated for a Project of this scope to range from 7 to 64 workers over a 12-month period. Based on the availability of nearby construction workers, Project construction would not cause a substantial influx of construction personnel that would result in unplanned population growth in the region.

Implementation of the Project would result in permanent employment opportunities. The existing employees onsite each day is 150 to 200. The proposed building would cater to future tenants in the R&D and life sciences field, and it is estimated that the proposed Project would have 200 employees [2] onsite each day. Therefore, it is expected that similar number of employees would be working at the Project site as compared to existing conditions. Furthermore, the Project would not remove any barriers to population growth such as providing housing, constructing transportation modes, increasing capacity of roadways or developing new roadways. Thus, the Project would not result in unplanned population growth or induce substantial growth in the City of Dublin. Therefore, there would be no impact from the Project.

Significant Irreversible Changes Context

CEQA (Public Resources Code Section 21100[B][2]) provides that an EIR shall include a detailed statement setting forth "[i]n a separate section…[a]ny significant effects on the environment that would be irreversible if the project is implemented." State CEQA Guidelines Section 15126.2(c) provides the following guidelines for analyzing the significant irreversible environmental changes of a project:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irretrievable damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

[2] Based on ABAG average square feet per employee rates for each "principal building activity" (ABAG 2011).

Significant Irreversible Changes

During Project implementation, the use of nonrenewable resources such as fossil fuels in the form of electricity, gasoline and diesel fuel from construction equipment and delivery trucks would occur. 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 other parts of the City. Therefore, it is not expected that construction fuel consumption associated with the proposed Project would be more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Other nonrenewable and slowly-renewable resources consumed as a result of Project development would include, but not necessarily be limited to, lumber and other forest products, sand and gravel, asphalt, petrochemical construction materials, and water. The use of these nonrenewable resources would account for only a small portion of the region's resources and would not affect the availability of these resources for other needs in the region.

Furthermore, the proposed Project would not result in irreversible damage from environmental accidents, such as an accidental spill or explosion of a hazardous material. During construction, hazardous materials such as gasoline, paint, adhesives and other materials classified as hazardous, would be subject to federal, state, and local health and safety requirements. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans), and use of these materials is regulated by DTSC, as outlined in CCR Title 22. The Project applicant and its construction contractors would be required to use, store, and transport hazardous materials in compliance with applicable federal and State regulations during Project construction. Furthermore, as discussed in Section 9: Hydrology and Water Quality of the Initial Study (Appendix A), a SWPPP would be required for the Project. The SWPPP would contain Spill Response Plan to address minor spills of hazardous materials. The nature of construction – that for a conventional industrial/commercial building– would not involve unusual amounts or types of hazardous materials that could result in irreversible damage from an accidental release.

Operation of the Project may involve the transport, use, and disposal of limited quantities of hazardous materials associated with the R&D and life sciences industry. If any hazardous materials are stored or handled at the Project site, either as a result of on-site businesses (similar to Hexcel) or from basic maintenance activities such as herbicides and cleaning products, the building tenants and maintenance staff would be required to follow manufacturer's instructions and (if applicable) would be required to prepare Hazardous Materials Release Response Plans and Inventories (Business Plans) and comply with the requirements of Hazardous Waste Generator (tiered permitting) Programs.

Implementation of the Project would not provide access to a previously inaccessible area, and the proposed infill redevelopment of an existing R&D facility would be expected to indirectly result in a reduction in the use of nonrenewable resources compared to new greenfield development.

The Project would result in the permanent, irreversible loss of a historical resource, due to the demolition of the existing Hexcel facility, which would be a significant and unavoidable impact, as discussed in Section 3. While this loss would be permanent and irreversible, implementation of Mitigation Measure CUL-1: HABS Recordation and Mitigation Measure CUL-2: Interpretive Displays would require the historical resource to be recorded for archival purposes and that an interpretive display be created for public education. Whilst such mitigation cannot reverse or mitigate the loss of the historical resource, such interpretative and archival materials would memorialize the contribution of the Hexcel facility to the Man in Space historic context for future generations.

Significant and Unavoidable Environmental Context

California Code of Regulations Section 15216.2(b) of the State CEQA Guidelines requires an EIR to include a discussion of any significant environmental impacts that cannot be avoided if the project is implemented. Chapter 3 of this EIR provides a detailed analysis of all significant and potentially significant environmental impacts related to implementing the proposed Project; identifies feasible mitigation measures, where available, that could avoid or reduce these significant and potentially significant impacts; and presents a determination whether these mitigation measures would reduce these impacts to less-than-significant levels. Section 4.1 above identifies the significant cumulative impacts resulting from the combined effects of the proposed Project and related projects. If a specific impact in either of these sections cannot be fully reduced to a less-than-significant level, it is considered a significant and unavoidable adverse impact.

Significant and Unavoidable Environmental Analysis

Implementing the proposed Project would result in the following significant adverse impacts:

- **Impact CR-1: The proposed Project would result in a substantial adverse change in the significance of a historical resource.** As discussed in the Cultural section of this EIR, the Project would result in the complete demolition of the existing Hexcel Corporation R&D facility, which is a historical resource as defined in CEQA Guidelines section 15064.5. The demolition of this facility would result in a significant direct impact even with the identified mitigation measures. Thus, this impact would be **significant and unavoidable**.

Source(s)

ABAG. 2011. ABAG Non Residential Buildings Analysis. Obtained March 8, 2023 from NonResidentialAnalysis_120511.pdf (ca.gov).

City of Dublin. 2023. Development Projects. Obtained June 6, 2023 from https://dublindevelopment.icitywork.com/.

Alternatives

Introduction

CEQA Guidelines Section 15126.6(a) requires that an EIR describe a range of reasonable alternatives to a project, or the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, a range of potentially feasible alternatives, governed by the "rule of reason," must be considered. This is intended to foster informed decision making and public participation (CEQA Guidelines Section 15126.6[f]).

CEQA generally defines "feasible" to mean capable of being accomplished in a successful manner within a reasonable period of time, taking into account environmental, social, technological, and legal factors. The following factors may also be taken into consideration when assessing the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and the ability of a project proponent to attain site control (CEQA Guidelines Section 15126.6[f][1]).

CEQA also requires that a No Project Alternative be evaluated (CEQA Guidelines Section 15126.6[e]). The analysis of a No Project Alternative is based on the assumption that a project would not be approved. In addition, an environmentally superior alternative must be identified among the alternatives considered. The environmentally superior alternative is generally defined as the alternative that would result in the least adverse environmental impacts to a project site and affected environment. If the No Project Alternative is found to be the environmentally superior alternative, the EIR must also identify an environmentally superior alternative among the other alternatives.

The analysis of alternatives is of benefit to decision makers, because it provides more complete information about the potential impacts of land use decisions. Consequently, there is a better understanding of the interrelationship among all of the environmental topics under evaluation. Decision makers must consider approval of an alternative if it would substantially lessen or avoid significant environmental impacts identified for a proposed project and if it is determined to be feasible.

Factors Considered in the Selection of Alternatives

The CEQA Guidelines recommend that an EIR briefly describe the rationale for selecting the alternatives to be discussed, identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency's determination (CEQA Guidelines Section 15126.6(c)). The following factors were considered in identifying the range of reasonable alternatives to the Project for this Focused EIR:

- The extent to which the alternative would accomplish most of the basic objectives of the Project;
- The extent to which the alternative would avoid or lessen the identified significant and/or unavoidable environmental effects of the Project;
- The feasibility of the alternative; and
- The extent to which an alternative contributes to a "reasonable range" of alternatives necessary to permit a reasoned choice.

Per Section 15126.6(b) of the CEQA Guidelines, the discussion of alternatives shall focus on alternatives to a project (or its location) that are capable of avoiding or substantially lessening significant impacts of a project, even if the alternatives would impede to some degree the attainment of the project objectives or would be more costly.

As discussed in the Initial Study (Appendix A), the proposed Project would result in significant adverse impacts on historical resources at the Project level. Mitigation measures are identified to reduce these Project impacts; however, none would reduce impacts to less than significant. Consequently, the loss of the historical resource associated with the proposed Project would be significant and unavoidable. This alternatives analysis, therefore, focuses on Project alternatives that could avoid or substantially lessen impacts of the proposed Project on historical resources.

The following alternatives that may avoid or substantially lessen impacts on the historical resource were identified:

- No Project Alternative
- Reduced Grading Alternative

These alternatives are analyzed in turn below, followed by a brief discussion of those alternatives considered but rejected from further analysis.

Description and Analysis of Alternatives Retained

No Project Alternative

The No Project Alternative assumes no development would occur on the Project site. The Hexcel Corporation R&D facility would not be demolished, the site would not be redeveloped with a new facility that appeals to the life sciences and manufacturing field, and Parcels 1 and 2 would not be rezoned.

Analysis of No Project Alternative

Compliance with Project Objectives

The No Project Alternative would not meet any of the proposed Project's objectives because it would not redevelop the site with a new and upgraded facility that appeals to the life sciences and manufacturing field and would not rezone Parcels 1 and 2 as a Planned Development.

Analysis of Impacts

With the No Project Alternative, the Project would not occur and the existing conditions would remain. The Hexcel Corporation R&D facility would not be demolished, therefore, there would be no impact to the historical resource. There also would be no ground disturbance, so there would be no potential impacts related to the discovery of previously unknown archaeological resources or human remains and paleontological resources. Furthermore, there would be no construction impacts associated with the Project on other resource areas evaluated in this EIR, including air quality, biological resources, energy, and hazards and hazardous materials.

Reduced Grading Alternative

The Reduced Grading Alternative would be similar to the proposed Project as it would still demolish the existing building and construct a new facility with other site improvements, as described in the Project Description. Where it differs from the proposed Project, is the depth and area of grading that would be required in the south and southeast portion of the site, which would be substantially reduced compared to the proposed Project.

The reduced grading would be accomplished by importing soil to build up the southern periphery of the property and by treating stormwater onsite with a valley gutter catch basin and a Silva cell of approximately 3280 square feet rather than having to grade for stormwater to be gravity fed into bioretention planters. The Silva cell is a modular suspended pavement system that utilizes soil volumes to support large tree growth and provide onsite stormwater management. The Silva cell would replace 3280 square feet of the two bioretention planters proposed in the southeast corner of the site adjacent to the south parking areas (see Figure 6A. Landscape Plan and Figure 6B: Landscape Plan Details); thereby, providing the same treatment area as the bioretention areas proposed in the proposed Project. Stormwater drainage would be provided by a shallow gutter, parallel to the south edge of the new structure, and a gentle slope along the eastern driveway of the new structure, both leading to conduits, which would drain to the Silva cell. The conduits would be installed by mechanical trenching at a minimum grade leading to the top of the Silva cell, which is 2 feet below ground surface. The top of the Silva cell dirt and landscape could be placed over it or asphalt to provide more parking space.

Excavation depths for this Alternative would generally be limited to less than 1 foot below current grade, except for the following three locations:

a) the Silva cell, which would be excavated to 7 feet below surface, with a surface area of approximately 468 feet (specific width and length are yet to be determined);
b) two trenches to install culverts leading to the Silva cell, each approximately 2 feet wide, a maximum of 2 feet deep, and less than 100 feet long; and
c) the southwest edge of the property, which would be excavated to a maximum of 7 feet below current surface, which is 2.5 feet less than in the original design.

The Reduced Grading Alternative also eliminates the need for the wall, and associated footings, along the south edge of the property.

Analysis of Reduced Grading Alternative

Compliance with Project Objectives

The Reduced Grading Alternative would meet all of the proposed Project's objectives while minimizing the area, degree, and significance of potential impact to buried archaeological resources and possible human remains associated with the adjacent Pioneer Cemetery, in addition to reducing potential impacts to paleontological resources and air quality, and reducing energy consumption.

Analysis of Impacts

The Reduced Grading Alternative would still involve the demolition of the existing Hexcel building in its entirety, and therefore, for the same reasons discussed for the proposed Project in Section 3, would have a **significant and unavoidable impact** to historical resources, even with the implementation of mitigation measures Mitigation Measure CUL-1: HABS Recordation and Mitigation Measure CUL-2: Interpretive Displays.

The use of a Silva cell for stormwater treatment is only being considered for this Reduced Grading Alternative, not for the proposed Project. The use of the Silva cell would dramatically reduce the amount of grading needed for stormwater management on the site, as described in the proceeding paragraphs. However, from an operational standpoint, the City has expressed concerns with the use of a Silva cell for this Project. The City is aware of other projects implementing Silva cells for stormwater treatment and those cells malfunctioning. Operational failure of these Silva cells can result in sewage getting mixed in to the stormwater treatment systems. Therefore, the City believes there is a risk implementing a Silva cell for stormwater treatment for this Project.[3]

With respect to buried cultural resources and tribal cultural resources, this analysis is focused on the area of the Project site with the highest sensitivity for buried historic era and pre-contact era archaeological resources (the High Archeological Probability Area), along the eastern property line and through the southern parking lot, an area of approximately 115,763 square feet (approximately 53 percent of the total project area).

The maximum depth of excavation for this alternative would be approximately 7 feet below ground surface, which is reduced from up to 10 feet below surface for the proposed Project. Moreover, under this alternative only approximately 26,000 square feet of the High Archeological Probability Area (approximately 23 percent) would include excavation greater than 1 foot below the current ground surface, compared to 61,850 square feet (approximately 53 percent of the High Archaeological Probability Area) for the proposed Project. Therefore, this alternative would reduce the risk of impacts to buried cultural resources within the High Archeological Probability Area by more than 120 percent. While this design does not completely eliminate the risk of impact to archaeological resources or human remains, the area

[3] Information provided during a phone call with Gaspare Annibale, Associate Planner at City of Dublin, on July 24, 2023.

and degree of potential impact are **significantly reduced** with the Reduced Grading Alternative. Nevertheless, the Project would still have the **potential to impact archaeological resources and the potential disturb human remains**, both of which could be **potentially significant**. All cultural and tribal mitigation measures would still apply, but the scope of archaeological testing and monitoring, and the potential for work stoppage due to archaeological discoveries, would all be significantly reduced. For the same reasons discussed for the proposed Project in Sections 3 and 7, implementation of mitigation measures Mitigation Measure CUL-3: Archaeological and Tribal Monitoring; Mitigation Measure CUL-4: Inadvertent Discovery Protocols; and Mitigation Measure TR-1**:** Inadvertent/Unanticipated Tribal Cultural Resources Discovery Protocols would reduce the impact to **less than significant with mitigation**.

The Reduced Grading Alternative would also reduce the potential to impact paleontological resources, as it would be reducing the depths of excavation where these resources could occur. As discussed in the description of the Reduced Grading Alternative section above, the Alternative would avoid excavation of more than 1 foot below current grade in most of the locations in the south portion of the site. Since artificial fill ranges from depths of 1.5 to 5 feet, reducing the depth of excavation to less than 1 foot would greatly reduce the risk of damage to these resources (see Section 5). However, since there are areas where excavation would still exceed 1 foot, this Alternative would not completely avoid potential impacts to paleontological resources. Therefore, the impact would remain potentially significant and mitigation measure GEO-1 would still apply. For the same reasons discussed for the proposed Project in Section 5, implementation of mitigation measure GEO-1 would reduce the impact to **less than significant with mitigation**.

Furthermore, by reducing the amount of grading, there would be less total construction equipment usage during the grading phase, which would reduce NOx, ROG, PM_{10} Exhaust and $PM_{2.5}$ Exhaust emissions. This Alternative would also reduce the potential for fugitive PM compared to the proposed Project, but fugitive dust PM_{10} and $PM_{2.5}$ is not quantified in BAAQMD since there are no quantitative thresholds for fugitive dust. Less grading equipment usage would also reduce energy-consumption during construction. Therefore, this Alternative would reduce impacts to air quality and reduce energy consumption compared to the proposed Project. Nonetheless, impacts would remain **less than significant with mitigation incorporated**, as fugitive dust control measures would still be required.

Alternatives Considered but Rejected

Two potential alternatives were considered for the Project but rejected from further consideration. They are described below.

Partial Preservation Alternative

The Partial Preservation Alternative would demolish the 1967-constructed administration area of the Hexcel Corporation R&D facility and 1980s building additions, but would retain the approximately 25,000-square foot, 1962-constructed research and development laboratory building where the NASA research on the honeycomb took place. A new 114,141 square foot

building would be constructed in place of the demolished portions of the existing building and be used by future tenants in the life sciences and manufacturing field. The 25,000 square foot laboratory building would be adaptively reused as a commercial self-storage facility, resulting in a mixed-used site, rather than a site used for solely life sciences and manufacturing.

With the Partial Preservation Alternative, the amount of square footage available for manufacturing/industrial uses would be greatly reduced from the proposed Project. This is because the City requires a certain amount of parking for different types of uses, and this Alternative would reduce the parking area by approximately 13,830 square feet to accommodate both the retained 25,000 square foot-lab and new 114,141 square foot-building. Because the retained laboratory with the new building would take up more space on the site than the Proposed project, there would be less space for the City-required parking, necessitating a shift in the proposed balance of manufacturing uses (which require higher levels of parking) and warehouse/distribution uses (which require less parking). Because of the decreased size of the new building and a slight shift towards greater warehouse/distribution uses from industrial uses, the new building would only accommodate two future tenants, opposed to four tenants for the proposed Project.

The Partial Preservation Alternative would not meet the Project objective to redevelop the site with a new and upgraded facility that appeals to the life sciences and manufacturing field because it would be developed as a mixed-used site with the introduction of the commercial self-storage facility in the retained 1962-constructed research and development laboratory building, which would not be as appealing to future life sciences/manufacturing tenants. It is also very important to note that this Alternative would not be economically feasible for the Project applicant due to the reduction in the number of tenants, and the reduction in value of commercial self-storage and warehousing floorspace compared to life sciences/manufacturing. The applicant prepared a Pro Forma for financial feasibility of Partial Preservation Alternative (Dublin Boulevard Owner LP, 2023) and found that this Alternative would result in a loss of approximately $10.8 million over the life of the Project, while the total upfront costs (capitalization) would be approximately $55.7 million, which is approximately 40 percent higher than the proposed project. Therefore, this Alternative would result in a loss of profit to the applicant and as a result, would be financially infeasible. Whilst economic/financial matters are not considered to be an environmental impact under CEQA, Section 15126.6(a) of the CEQA Guidelines requires that an EIR consider “a reasonable range of potentially feasible alternatives” to the proposed project and Section 15126.6(f)(1) of the Guidelines specifically lists economic viability among the factors that may be taken into account when addressing the feasibility of alternatives.

Furthermore, it is unlikely that the Partial Preservation Alternative would avoid the significant and unavoidable impact on the historical resource. Although this alternative would retain the most important portion of the Hexcel Corporation R&D facility contributing to its eligibility as a historical resource, and would therefore have a reduced level of impact compared to the proposed Project, the alternative would still demolish more than half of the original structure and would also involve substantial changes to the setting of the historical resource. It is

considered unlikely that feasible mitigation measures could be implemented to fully mitigate the potentially significant impacts to a less than significant level.

For all of these reasons, this Alternative has been rejected from further consideration within this EIR.

Alternative Location

An alternative site location was considered and rejected because the purpose of the proposed Project is specific to this property. The use of another site for this Project would not meet the project's purpose and need. As described in the Project Description, the purpose and need for this Project is to redevelop the Hexcel site with a new and upgraded facility that appeals to the life sciences and manufacturing field and to rezone Parcels 1 and 2 of this site as a Planned Development. Furthermore, the Project applicant already owns this site, which works for the scale and type of project that the applicant has proposed. Development of the Project on the proposed site will help ensure the construction of the Project is affordable and accomplished in a timely manner. A new site option would require applicant to sell this site and then find a new site in the City limits of a similar size designated for this type of use. Therefore, an alternative location was rejected from further consideration in this EIR.

Environmentally Superior Alternative

CEQA requires that, among the alternatives, an "environmentally superior" alternative be selected and that the reasons for such selection be disclosed. In general, the environmentally superior alternative is the alternative that would generate the fewest or least severe adverse impacts. Table 9: Comparison of Proposed Project and Alternatives below provides a comparison of the Project to the alternatives with respect to the potential to avoid or substantially reduce environmental impacts.

Table 9: Comparison of Proposed Project and Alternatives

Environmental Topic	Proposed Project	No Project Alternative	Reduced Grading Alternative
Air Quality	LTSM	**No Impact**	LTSM
Biological Resources	LTSM	**No Impact**	LTSM
Historical Resources	S&U	**No Impact**	S&U
Archaeological Resources	LTSM	**No Impact**	**LTSM-**
Energy	LTSM	**No Impact**	LTSM
Geology & Soils	LTSM	**No Impact**	**LTSM-**
Hazardous Materials	LTSM	**No Impact**	LTSM
Tribal Cultural Resources	LTSM	**No Impact**	**LTSM-**
Number of topics with increased impact	N/A	0	0
Number of topics with decreased impact	N/A	All	4

Source: compiled by AECOM in 2023. For each alternative, the significance determination shown in the table for a particular impact is the most severe of the construction or operational-phase impact.
Acronyms: N/A = Not Applicable; LTSM = Less than Significant with Mitigation; S&U = Significant and Unavoidable.
Bold indicates that impact is different level of significance than the Project.
- indicates that although the overall level of significance for the Alternative would be the same as the proposed Project, the duration or intensity of the impact would be less, and/or fewer mitigation measures would be required.

The No Project Alternative would be the environmentally superior alternative as it would avoid any impacts related to the construction of the proposed Project, including impacts related to air quality, biological resources, cultural and tribal resources, energy, hazardous materials, and paleontological resources. However, when the No Project Alternative is the environmentally superior alternative, CEQA requires that an additional alternative be identified. In this case, the Reduced Grading Alternative is the environmentally superior build alternative, as it would reduce the potential to impact archeological and other buried resources such as paleontological resources due to reduced grading depths, while still meeting all of the Project objectives. All the other resource areas analyzed in this EIR and Initial Study in Appendix A would be the same or similar.

Source(s)

Dublin Boulevard Owner, LP. 2023. Pro Forma for Financial Feasibility of Partial Preservation Alternative. Provided by email from applicant on June 13, 2023.

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Figures

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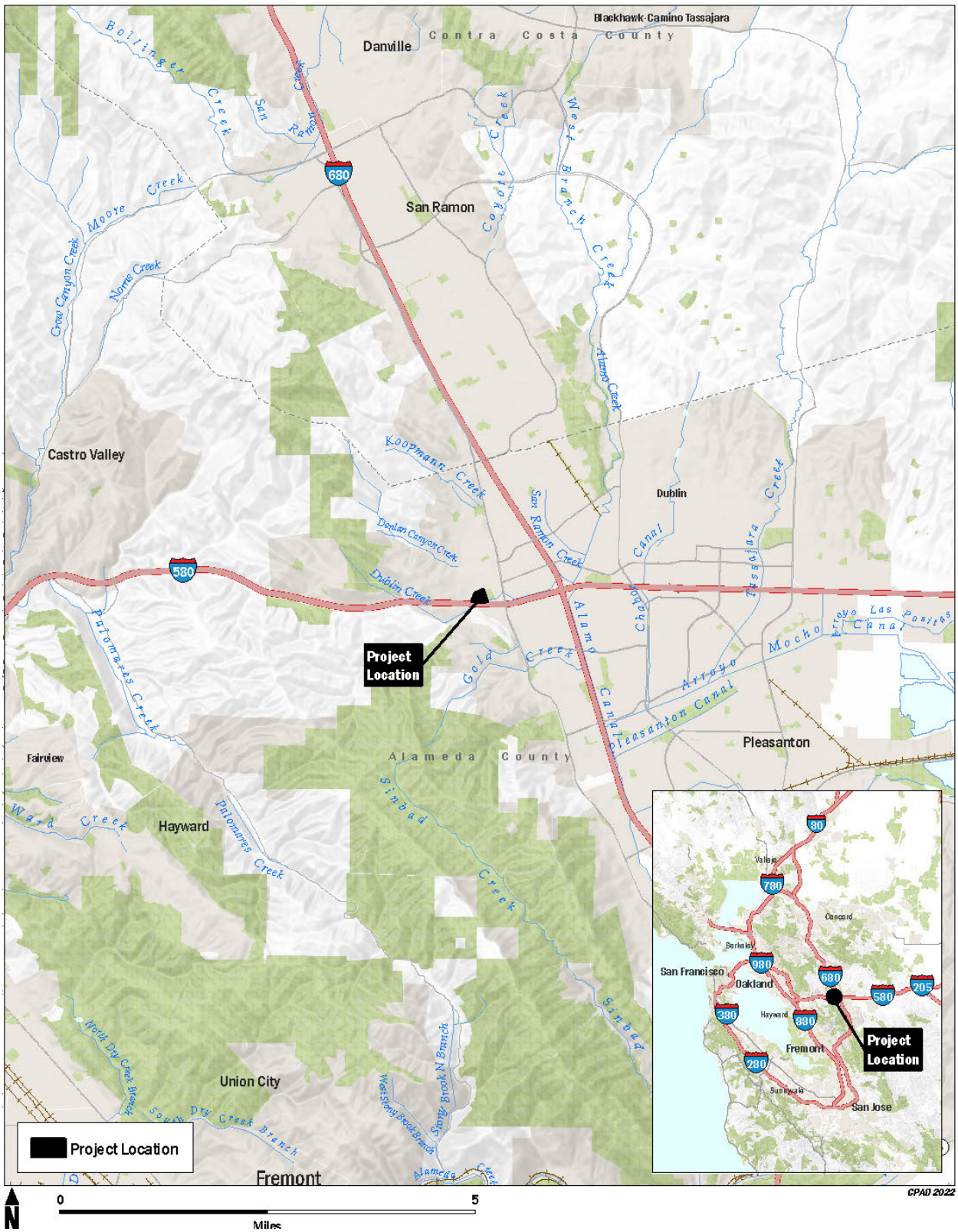

Figure 1. Project Location

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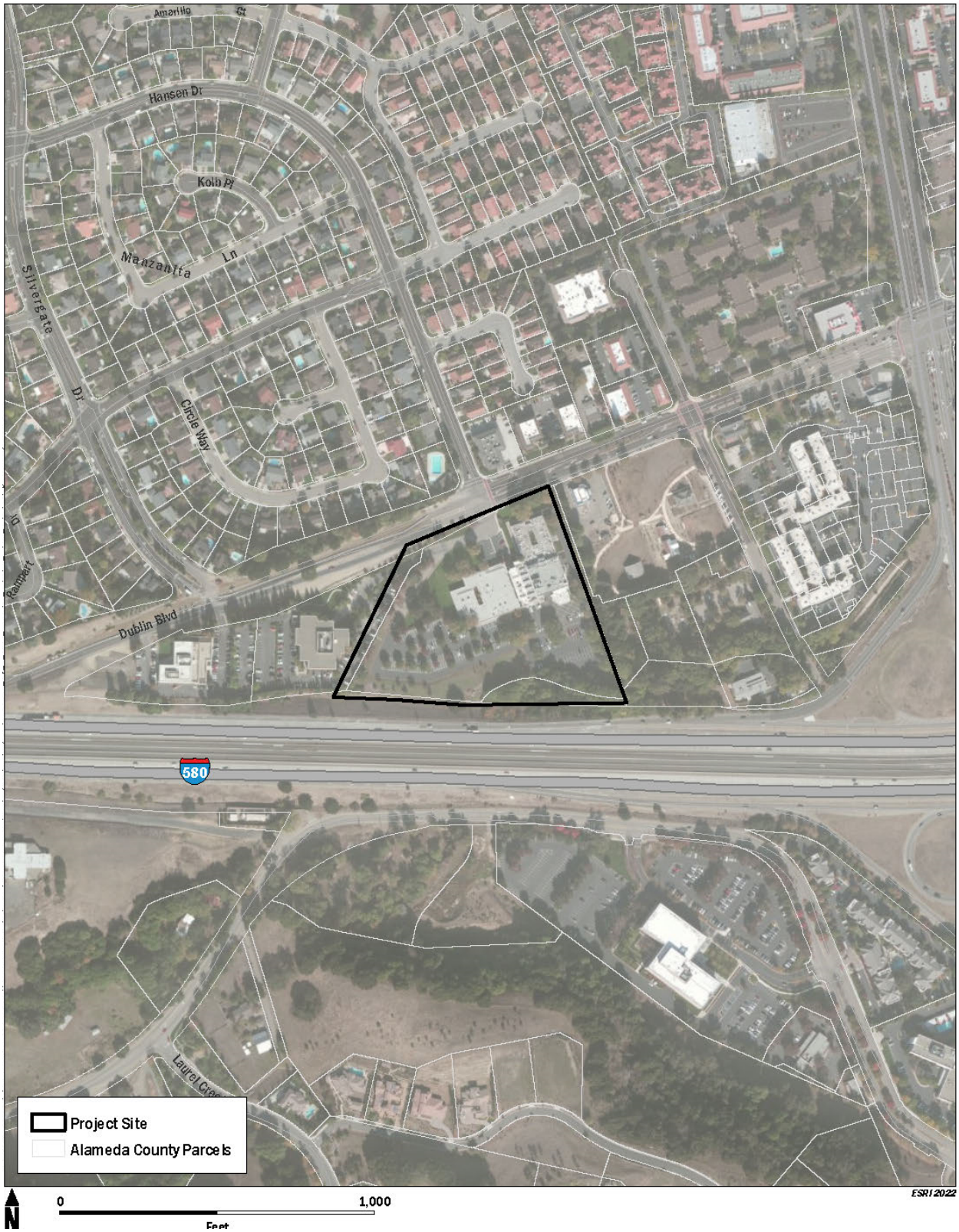

Figure 2. Project Site

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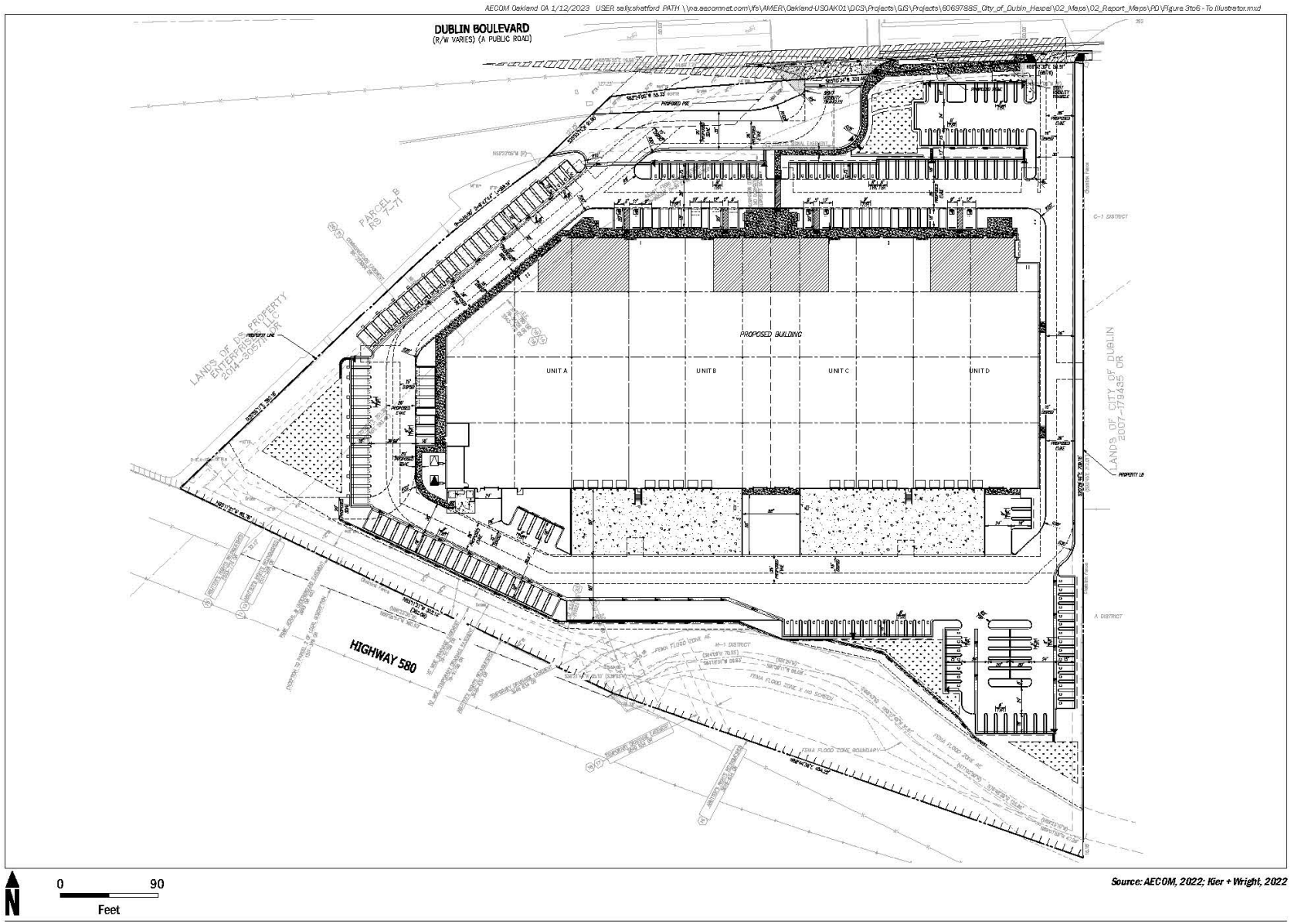

Figure 3. Site Plan

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Figure 4. Elevations

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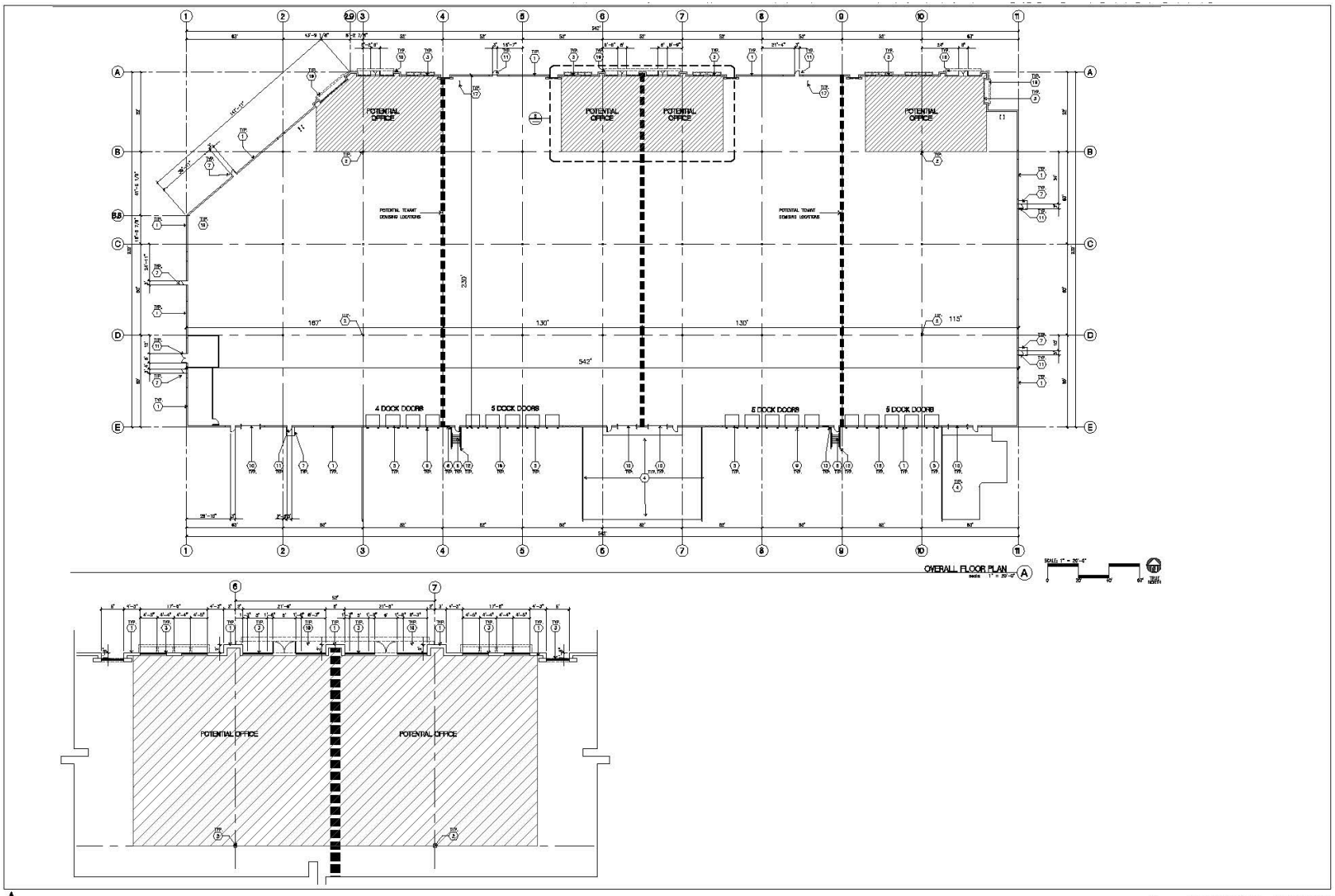

Figure 5. Overall Floor Plan

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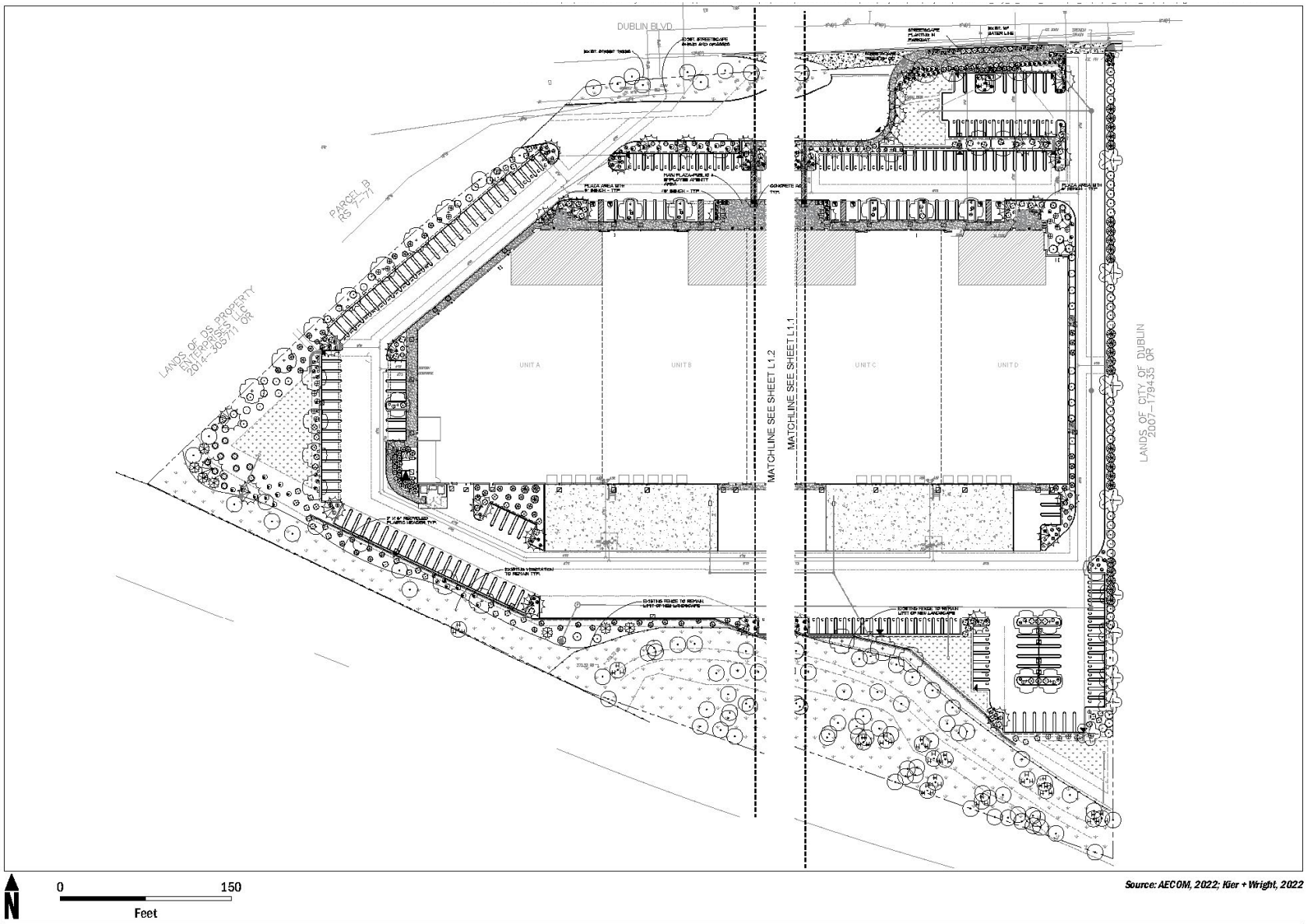

Figure 6A. Landscape Plan

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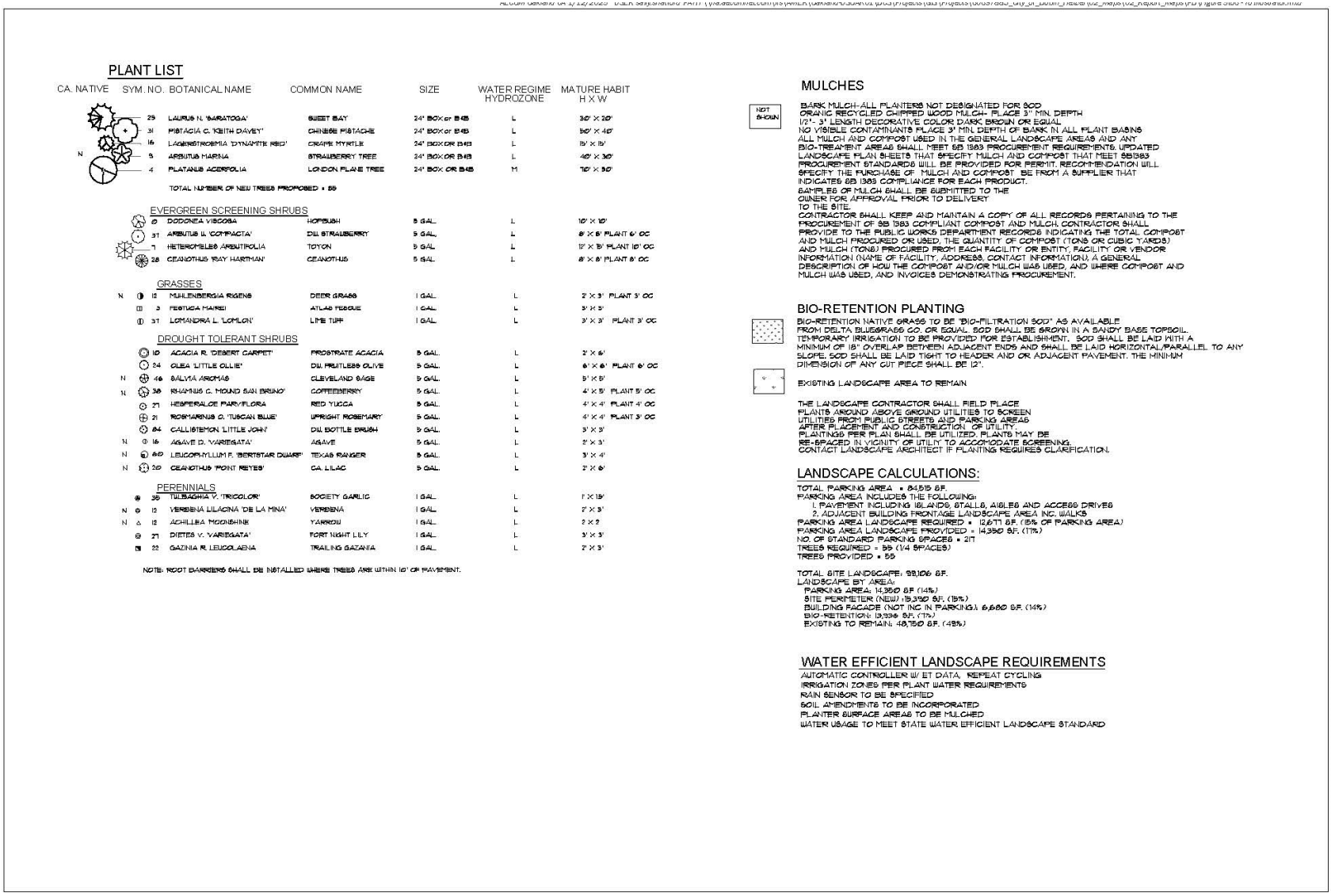

Source: AECOM, 2022; Kier + Wright, 2022

Figure 6B. Landscape Plan Details

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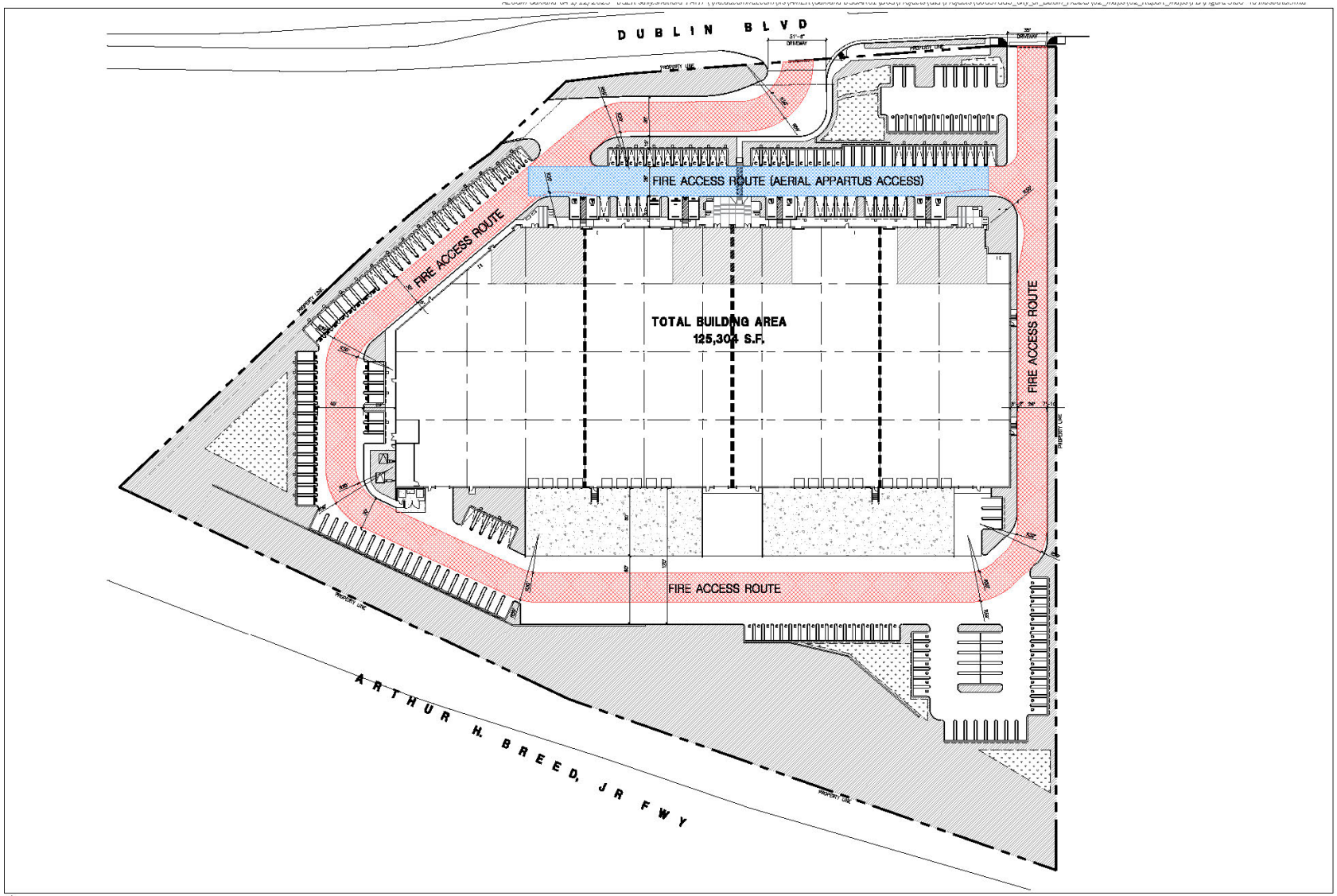

Figure 7. Fire Access Route

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Appendices

Appendix A: Initial Study

Appendix B: Notice of Preparation and Scoping Comments

Appendix C: Technical Memorandum – Historical Resources Evaluation Report

Appendix D: CalEEMod Output Sheets

Appendix E: Final Transportation Impact Study

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Appendix A: Initial Study

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DUBLIN
CALIFORNIA

Hexcel Redevelopment Project

Initial Study

July 26, 2023

PROJECT APPLICATION PLPA-2022-00038

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Acronyms

1,1,1-TCA	1,1,1-trichloroethane
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACDEH	Alameda County Department of Environmental Health
ACFCWCD	Alameda County Flood Control and Water Conservation District
ACFD	Alameda County Fire Department
ACMs	asbestos-containing materials
ADA	American With Disabilities
ADWF	average dry weather flow
AFY	acre-feet per year
Alameda CTC	Alameda County Transportation Commission
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
APN	Assessor Parcel Numbers
Ardent	Ardent Environmental Group
AUF	acoustical usage factor
AVI	Amador Valley Industries
BAAQMD	Bay Area Air Quality Management District
Basin Plan	*Water Quality Control Plan*
bgs	below the ground surface
BMPs	Best Management Practices
Business Plans	Hazardous Materials Release Response Plans and Inventories
C&D	construction and demolition
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Standards Code
CCR	California Code of Regulations
CDMG	California Department of Mines and Geology
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CF	Carbon-Free Energy
CFR	Code of Federal Regulations

CGS	California Geological Survey
CH_4	methane
CHP	California Highway Patrol
City	City of Dublin
CMP	Congestion Management Program
CNDDB	California Natural Diversity Data Base
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide-equivalents
Cornerstone	Cornerstone Earth Group
county	County of Alameda
CUPA	Certified Unified Program Agency
CWA	federal Clean Water Act
CY	cubic yard
dB	decibels
dBA	A-weighted decibel
DBH	diameter breast height
DOC	California Department of Conservation
DOF	California Department of Finance
DSRSD	Dublin San Ramon Services District
DTSC	California Department of Toxic Substances Control
EBCE	East Bay Community Energy
EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District
EDR	Environmental Database Report
EE	Efficiency and Electrification
EIR	Environmental Impact Report
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
ESA	Federal Endangered Species Act of 1973
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTA Manual	Federal Transit Administration Manual
g	gravity
GGEs	gasoline gallon equivalents of petroleum
GHG	greenhouse gas

gpd/ksf	gallons of water per day per 1,000 square feet
GWP	Global warming potential
Hi Bay	laboratories were used for small-scale testing, while the building located south of the offices/laboratories
HVAC	heating, ventilation and air conditioning
Hz	Hertz
I-	Interstate
in/sec	inches per second
IPaC	Information for Planning and Consulting
IS	Initial Study
ISO	International Organization for Standardization
LED	light emitting diode
L_{eq}	Equivalent Sound Level
L_{max}	Maximum Noise Level
LID	Low Impact Development
light industrial	zoned M-1
LOS	level of service
LRAs	local responsibility areas
mg	million gallons
MGD	million gallons per day
MM	Materials and Waste Management
MND	Mitigated Negative Declaration
mph	miles per hour
MRZs	Mineral Resource Zones
MTC	Metropolitan Transportation Commission
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NFPA	National Fire Protection Association
NHSTA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOA	Naturally Occurring Asbestos
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
OES	Office of Emergency Services
OPR	Governor's Office of Planning and Research
PD	Planned Development
PG&E	Pacific Gas & Electric Company
PM	particulate matter
PM_{10}	PM equal to or less than 10 micrometers in diameter

$PM_{2.5}$	PM equal to or less than 2.5 micrometers in diameter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	peak particle velocity
PRC	Public Resources Code
proposed project	The proposed actions that would involve replacing existing building with a new building and other site improvements
R&D	research and development
R-5	single-family residence
RCNM	Roadway Construction Noise Model
ROGs	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SM	Sustainable Mobility and Land Use
SMARA	Surface Mining and Reclamation Act of 1974
SO_2	sulfur dioxide
SRVRWP	San Ramon Valley Water Program
ST	Short-term
STAA	Surface Transportation Assistance Act
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
TACs	toxic air contaminants
TCE	trichloroethene
TIA	Traffic Impact Analysis
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
VHFHSZ	Very High Fire Hazard Severity Zones
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WB-62	Interstate Semi-Trailer

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Hexcel Redevelopment Project
Initial Study

Background & Project Description

Project Title

Hexcel Redevelopment Project

Lead Agency Name and Address

City of Dublin
Community Development Department
100 Civic Plaza
Dublin, CA 94568

Contact Person and Phone Number

Gaspare Annibale
Associate Planner
Phone: 925/833-6610
Gaspare.Annibale@dublin.ca.gov

Project Location

The Project site is located at 11711 Dublin Boulevard in the City of Dublin, Alameda County, California. The site includes two parcels totaling 8.81 acres (Assessor Parcel Numbers [APN] 941-1560-009-01 [Parcel 1] and 941-1560-003-04 [Parcel 2]). Parcel 1 is the developed portion of the site and consists of the existing Hexcel research and development (R&D) building, landscaping and parking. Parcel 2 is located south of the Hexcel building and consists of a landscape area and the Dublin Creek riparian corridor. See Figure 1. Project Location.

As shown in Figure 2. Project Site, the Project site is approximately 8.81 acres located south of Dublin Boulevard in the Dublin Village Historic Area Specific Plan with the U.S. Bank Branch and Dublin Heritage Park and Museums and Dublin Pioneer Cemetery to the east; Interstate (I-)580 to the south; and a business park to the west. Regional access to the project site is provided by I-580 and I-680, with local access provided by Dublin Boulevard.

Project Applicant/Sponsor Name and Address

Dublin Boulevard Owner, LP
19700 S. Vermont Ave
Suite 101
Torrance, CA 90502

General Plan Designation

Business Park/Industrial

Zoning

M-1 – Light Industrial and Planned Development (PD) (Ordinance No. 80-60)

Project Description

This Initial Study, pursuant to the California Environmental Quality Act (CEQA), describes the proposed project and the project's potential impacts on the surrounding environment. The City of Dublin (the City) is the Lead Agency for review of the proposed project under CEQA.

Proposed Project

The proposed Project would result in the existing 62,715 square foot industrial building being demolished and a new 125,304 square foot building being developed on the 8.81-acre Project site. The new building would cater to future tenants in the R&D and life sciences field. Other site improvements would include landscaping; parking; a fire access road; circulation improvements for truck access and loading and unloading materials; utilities; pavement and grading to treat site drainage. Figure 3. Site Plan shows the proposed site layout. The following sections describe the proposed Project and project components.

Proposed Building

The proposed building would cover approximately 33 percent of Parcel 1 (see Figure 3. Site Plan). The building would be set back approximately 135 feet from Dublin Boulevard, separated by landscaped areas, parking stalls and a fire access route for aerial apparatus access (described in succeeding sections). As shown in Figure 4. Elevations, the building would be a single-story building with the potential addition of a second floor mezzanine office and would have a maximum height of 40 feet. The outside of the building would be made of concrete tilt-up panels painted in various colors including blue, white and gray. The north side (front) of the building would have separate entrances to the lower level of each of the four separate tenant spaces (i.e., Units A, B, C and D). Access to the upper mezzanine office spaces would be provided from the interior of the building via stairways. The double doors to the entrance would have aluminum framing with insulated tempered glazed windows. Units B and C would also have doors on the front of the building that would provide access to the industrial and warehouse spaces. Large, glazed windows with aluminum framing would be installed on both lower and upper levels of the building to provide for maximum light filtering from the outside into the office spaces. The west and northwest side of the building would provide for six separate points of ingress/egress into the Unit A industrial and warehouse space, and from the inside provide access outside to adjacent parking stalls and a large landscaped area at the west corner of the site. The east side of the building would provide for four points of ingress/egress into Unit D and would have large vision glass that would allow light to flow into the space from outside while keeping the inside of the building cool and private. The south side (rear) of the building would have 4 to 5 dock doors per unit for loading and unloading of materials from the warehouses. There would be four drive-in doors for truck access inside the warehouse.

The interior design of the building would maximize natural light with mezzanine offices on the second floor overlooking the ground floor. The total square footage of the first floor would be 119,304 square feet and the second floor would be 6,000 square feet. As indicated in Table 1: Building Composition by Level, the space would be configured for different uses related to life sciences and advanced manufacturing. The overall building square footage could potentially be divided into four separate units (Units A, B, C and D), each with separate entrances, for four future tenants (see Figure 5. Overall Floor Plan). Each of the units would be between 26,000 to 34,000 square feet consisting of office, industrial, and warehouse space.

Table 1: Building Composition by Level

Level	Use	Square Footage
Level 1	Office	12,000
Level 1	Light industrial	30,000
Level 1	Warehouse	77,304
Level 2	Office	6,000

Other features of the building would include an interior bike rack, interior roof drain with pipe overflow, and an electrical room. All walking surfaces would be non-slip types. The floors would be a flat/tilt concrete slab and interior walls would be concrete. The building would be designed in compliance with fire codes related to fire access, internal sprinkler systems, electrical systems and fire-retardant materials. Additionally, the building would comply with American With Disabilities (ADA) standards related to access, ramps, breakrooms and bathrooms.

Landscape Improvements

Most of the existing landscape would be replaced, as illustrated in Figure 6A. Landscape Plan, except within the southern portion of the site (Parcel 2) where existing vegetation within the riparian corridor of Dublin Creek and along the I-580 boundary would be retained. The total site landscape area would be 99,106 square feet, which includes new and existing landscape. A variety of evergreen shrubs, ornamental trees, grasses, and perennials would be planted around the perimeter of the site and at parking lot areas as listed in Figure 6B: Landscape Plan Details. A total of 85 trees would be added to the site along with other plant materials. Some of the proposed plants include sweet bay, strawberry tree, toyon, hopbush, coffeeberry, red yucca, agave, fort night lily, ceanothus and atlas fescue. Bark mulch would be placed in planters around shrubs.

Native and drought tolerant plants would be utilized to enhance biodiversity and conserve water. Large ornamental trees planned for parking lot areas would provide shade and minimize radiating heat. The landscape would be designed to provide buffers between the site and adjacent properties, and plants would be strategically placed to screen the site's aboveground utilities from public streets. Temporary and permanent irrigation systems would be installed to establish plants. A 3,827 square foot grass bio-swale surrounded by trees and shrubs is proposed in the west corner of the site. Additional bio-swales/bioretention planters are

proposed in the northeast and southeast areas of the site. The total bioretention areas would be 9,819 square feet.

Parcel 1 of the Project site contains 87 trees, four of which are heritage trees. All trees within this parcel would be removed except for two of the heritage trees; one in the northeast corner along the project frontage and one in the southwest portion of the site. The heritage trees that would be removed in Parcel 1 include one in the northwest portion of the site and one near the center of the site. Parcel 2 of the Project site contains 109 trees within the Dublin Creek riparian corridor. All trees in Parcel 2 would be retained, 19 of which are heritage trees.

Access, Circulation and Parking

Vehicular access would be provided from two existing driveways off Dublin Boulevard, one near the center of the site frontage and the other at the eastern boundary. These driveways would be connected by a 30 to 40-foot-wide fire access route around the perimeter of the proposed building (Figure 7. Fire Access Route). A total of six fire hydrants would be installed along this fire access road. The road would be designed to accommodate emergency response vehicles (i.e., fire trucks), delivery box trucks, and trash trucks. A 26-foot-wide fire access route along the northern side of the building would allow for aerial apparatus access.

A total of 217 parking spaces would be provided for the Project. The parking spaces would be located around the perimeter of the building and at the edges of the site, and would include stalls for compact vehicles, standard vehicles, electric vehicle (EV) charging stations, and accessible parking. Compact parking would account for 27 percent of the overall parking spaces, while EV parking would account for 45 percent of the overall parking spaces. Additionally, 12 long-term and 12 short-term bicycle stalls would be provided onsite. Offsite loading spaces would be provided in the back (south) of the proposed building adjacent to the dock doors and facing Highway 580. No truck parking or loading will be facing the street.

Utilities Systems

The Project site is currently served by existing utilities for water, sanitary sewer, electricity, and gas. As discussed in Section 18: Utilities and Service Systems, Dublin San Ramon Services District provides water and wastewater services to the site, and East Bay Community Energy provides electricity and gas to the site, which is distributed by Pacific Gas and Electric Company. Sanitary sewer, sanitary sewer manholes, a water meter, and electrical lines and cables would be removed and replaced with new lines that would connect to existing offsite service lines. Additionally, an existing electrical cabinet, storm drain pipe, electrical transformer, and air conditioner unit are proposed for removal and would be replaced. Some of the existing stormwater lines will be left in place but abandoned. New utility lines would be buried below ground.

A fire service line would connect to a public water line, which would provide water to the fire hydrants located around the site. Irrigation lines would also connect to public water lines. Stormwater would be treated onsite via five bioretention treatment planter areas that would be implemented in the western corner, southeast corner and south and northeast portions of the site. The site would be graded to have water flow into these biorientation areas.

Approximately 9,819 square feet of bioretention areas on the Project site would be used for stormwater control. The proposed Project would include catch basins and storm drains throughout the project site. Full trash capture devices would be installed in all storm drain catch basins.

Other Improvements

An approximately 6-foot-high retaining wall would be installed along the southern edge of the parking lot and bioretention area in the southwest portion of the site, and lower (approximately 1- to 2-feet-high) retaining walls would be constructed adjacent to the bioretention areas in the southeast and northeast portions of the site. Additional retaining walls would be constructed to create loading dock ramps along the southern façade of the building.

A trash enclosure is proposed immediately adjacent to the backside of the building to the west. The trash enclosure would be 10.5 feet tall and 25.75 feet wide. A metal screen would be installed on the top of the enclosure to prevent illegal dumping. Double doors to move dumpsters in and out of the enclosure and an accessible gate would be provided in the front of the enclosure. The enclosure would store two 6-cubic yard (CY) dumpsters and one 2-CY bin for green waste.

A pathway would be constructed that would extend from the front of the proposed building to the side of the building providing access to doors along the building, parking spaces and the trash enclosure. A trash container for trash, recycle and compost would be installed near the front entrance of the proposed building.

Construction Activities and Schedule

A detailed construction schedule has not been determined at this phase; however, all construction of the Project is anticipated to occur over a 12-month period with some of the phases overlapping. Work would occur during weekdays from 7 am to 4 pm. The anticipated (preliminary) construction schedule is provided in Table 2: Anticipated Construction Schedule, which may be updated subject to market conditions, regulatory approvals, and other factors. The number of onsite workers would vary depending on the construction phase, but it is anticipated for a Project of this scope to range from 7 to 64 workers. Typical grading depths throughout the site would be less than 2 to 3 feet below ground level. The maximum depth of excavation would be between 12 to 20 feet below the existing ground level at the storm drain pump, which would be located in the southern portion of Parcel 1. In the parking lot near the southwest corner, grading would extend to approximately 4.5 feet below ground level.

Construction phases would include demolition, site preparation and grading, trenching and foundation work, exterior building construction, interior building construction, and outside paving/landscaping. A summary of each construction phase is described below.

Demolition – This stage would include the demolition of the existing facility, asphalt pavement (140,724 square feet), concrete curbs, landscape including trees and bushes, irrigation system, drainage system, sewer system, site lights, electrical boxes and other electrical equipment, gas

and water meters, fence, shed and gate. Anticipated construction equipment to be used would include concrete saws, excavators, loaders, tractors, backhoes, and rubber-tired dozers.

Site preparation/grading – After the demolition phase, the site would be cleared of all demolition waste and earthmoving activities such as excavation, grading and leveling would take place to prepare the site for the proposed building and other site improvements. Utility line trenching would also occur during this stage. Anticipated construction equipment to be used would include graders, rubber-tired dozers, tractors, loaders, and backhoes.

Trenching and foundation – This phase would consist of excavating and trenching for footings, laying down reinforcing bars (rebar) for retaining walls, drilling piers, preparing beams for foundation, and pouring the foundation slab. Anticipated construction equipment to be used would include tractors, loaders, backhoes, and excavators.

Exterior building construction – This phase would include construction of framing, roof, and siding and installation of exterior windows and doors. Anticipated construction equipment to be used would include cranes, forklifts, generator sets, welders and tractors, loaders, backhoes and excavators.

Interior building construction – This stage would involve the interior rough out and interior finishes of the building. Walls, flooring, stairs, ceiling, windows, doors, interior electrical and plumbing would be developed at this phase. Anticipated construction equipment to be used would include air compressors and aerial lift.

Paving and landscape – This stage would include laying down the pavement for the parking, driveways, fire access road, and walkway areas. This stage also includes installation of landscaping and irrigation around the site. Anticipated construction equipment to be used would include cement and mortar mixers, pavers, pavement equipment, rollers, tractors, loaders, and backhoes.

Table 2: Anticipated Construction Schedule

Construction Phase	Schedule	Duration
Demolition	Late fall 2023 to winter 2024	3 months
Site preparation/grading	Early spring 2024	1 month
Trenching and foundation	Spring 2024	1 month
Exterior building construction	Late spring 2024 to fall 2024	6 months
Interior building construction	Late fall 2024	2 months
Paving/landscape	Late fall 2024 to early winter	2 months

Project Approvals

The City of Dublin is the Lead Agency for the proposed Project under CEQA. The City would be responsible for considering the Project's impacts as part of the Project approval. The City would require the applicant to obtain the following approvals and permits: approval of a Planned Development Rezone with a related Stage 1 and Stage 2 Development Plan; Site Development

Review Permit; Heritage Tree Removal Permit; and demolition, building, grading, and encroachment permits.

Other agencies whose approval may be required include:

- Bay Area Air Quality Management District (BAAQMD); and
- Regional Water Quality Control Board (RWQCB).

Environmental Setting

Project Site and Existing Facilities

The Project site is located at 11711 Dublin Boulevard in the City of Dublin, Alameda County, California. The site includes two parcels totaling 8.81 acres; APN 941-1560-009-01 [Parcel 1] is the larger parcel at 8.30 acres and is located adjacent to Dublin Boulevard, and [APN] 941-1560-003-04 [Parcel 2] is the smaller parcel at 0.51 acre and is located toward the back (south) of the Project site adjacent to I-580. The site slopes from a maximum elevation of approximately 395 feet above mean sea level near the southwest corner to about 382 feet at the northern corner. Parcel 1 is zoned M-1 (light industrial) and PD (Ordinance No. 80-60) and Parcel 2 is zoned M-1 (light industrial).

The site is also located in the Dublin Village Historic Area Specific Plan boundary. The Specific Plan intends to protect and preserve historical resources and further enhance this area with development that is compatible with the extant historic buildings and remnants in the area. The original historic buildings in this area include St. Raymond's church, the Murray Schoolhouse, Pioneer Cemetery, Green's Store, and two bungalow homes. These resources function together as the Dublin Heritage Center, a local history museum and cultural center. The Specific Plan boundary extends from Cronin Circle to I-580 and San Ramon Road to Hansen Drive, including portions west of Hansen Drive along Dublin Boulevard. The Dublin Village Historic Area encompasses approximately 40 acres (City of Dublin 2014).

Parcel 1 (the northern and main portion of the site) is developed with a 62,715 square foot building, at-grade parking, underground and aboveground utilities, pavement, and ornamental landscaping. The existing building is being used as a R&D facility. The landscape consists of grass areas and mature trees.

Parcel 2 (the southern parcel) is undeveloped and is surrounded by dense riparian vegetation including mature trees. The Dublin Creek runs along the approximate southern boundary and is approximately 13 to 18 feet below the adjacent site elevations.

Surrounding Land Uses

As shown in Figure 2. Project Site, the Project site is immediately surrounded by commercial office uses including an R&D facility, medical and professional offices to the west, US Bank, Dublin Pioneer Cemetery, and the Dublin Heritage Park and Museums to the east; I-580 to the south; and Dublin Boulevard to the north. To the north of Dublin Boulevard and to the east of the Dublin Heritage Park and Museums and cemetery are single-family houses. Approximately a mile to the west is Dublin Hills Regional Open Space Preserve.

Environmental Checklist

Environmental Factors Potentially Affected by the Project

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" and/or a potentially significant impact that could be reduced to "Less than Significant with Mitigation", as indicated by the checklist on the following pages. Impact summaries for all CEQA impacts with a less than significant impact with mitigation and a potentially significant impact are provided in this Initial Study and analyzed further in the Focused EIR.

	Aesthetics		Agricultural and Forestry Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Energy
X	Geology / Soils		Greenhouse Gas Emissions	X	Hazards & Hazardous Materials
	Hydrology / Water Quality		Land Use / Planning		Mineral Resources
	Noise		Population / Housing		Public Services
	Recreation		Transportation / Traffic	X	Tribal Cultural Resources
	Utilities / Service Systems		Wildfire	X	Mandatory Findings of Significance

Instructions

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question (see Source List, attached). A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that any effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated: applies where incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must

describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier Analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets:

   a. Earlier analysis used. Identify earlier analyses and state where they are available for review.

   b. Impacts adequately addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   - the significance criteria or threshold, if any, used to evaluate each question; and

   - the mitigation measure identified, if any, to reduce the impact to less than significance

10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

    Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See

Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Determination

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	
I find that the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.	X
I find that the proposed project MAY have a potentially significant or a potentially significant unless mitigated impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

CITY OF DUBLIN

Anne Hersch,
Assistant Community Development Director

7/26/23

Date

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Explanation of Environmental Checklist Responses

Aesthetics

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
1.	**AESTHETICS. Would the project:**				
a)	Have a substantial adverse effect on a scenic vista?				X
b)	Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c)	Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality				X
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Environmental Setting

The Project site is in the southwest portion of the City of Dublin surrounded by commercial and residential uses. The site includes two parcels totaling 8.81 acres. Parcel 1 (the northern and main portion of the site) is the larger parcel at 8.30 acres and is developed with a 62,715-square-foot building, at-grade parking, and underground and aboveground utilities. Photo 1 shows a view of the Project site from the intersection of Dublin Boulevard and Hansen Drive. The existing structure is one and two stories and generally white in color. The building setback varies from approximately 75 feet to 175 feet from Dublin Boulevard.

Photo 1: View of the Project site from the Intersection of Dublin Boulevard and Hansen Drive

The Contemporary/Brutalist architectural style building has a roughly L-shaped plan and was largely constructed in two phases in 1962 and 1967, with small additions and alterations in the mid-1980s. The original 1962 portion of the facility is on the east half, has a roughly rectangular plan, and is constructed of tilt-up concrete panels in a north-south orientation. The north end of the building rests on a concrete foundation and is one story tall. The exterior is clad with scored concrete, and the flat roof parapet is lined with a louvered metal equipment screen. A privacy screen that uses vertically oriented, narrow wood slats lines the west side of the east half of the facility and terminates near the secondary entry, which consists of a pair of glazed, metal double doors.

The 1967-constructed portion of the facility abuts the west side of the two-story building hyphen. This single-story building section has a T-shaped plan and an east-west orientation. The building is characterized by a flat roof with deep eaves and fascia that is supported by repeating narrow, concrete pylons with wood sheathing on all sides.

A two-story building hyphen built in 1984 connects the 1962-constructed east half with the 1967-constructed west half. The hyphen has a flat roof and is clad with scored concrete. A single-story chemical storage addition, constructed in 1985, is at the southeast corner of the facility. The addition has a square plan, a flat roof, with scored panel lines in the concrete exterior.

Parcel 1 of the Project site contains 87 trees, four of which are heritage trees. Landscaped areas within Parcel 1 are comprised of sod, various ornamental shrubs, various ornamental tree species, as well as a large number of native trees such as coast live oak trees, California Bay, and California buckeye.

Dublin Creek is located to the south of the Project footprint on Parcel 2 and runs between the Project footprint and I-580. Parcel 2 (the southern parcel) is undeveloped and is surrounded by dense riparian vegetation and contains 109 trees within the Dublin Creek riparian corridor. Dublin Creek is approximately 13 to 18 feet below the adjacent site elevations.

The Project site is immediately surrounded by commercial office uses including an R&D facility, medical and professional offices to the west, and US Bank, Dublin Pioneer Cemetery, and the Dublin Heritage Park and Museums to the east. To the north of Dublin Boulevard and to the east of the Dublin Heritage Park and Museums and cemetery are single-family houses. Approximately a mile to the west is Dublin Hills Regional Open Space Preserve. The buildings in the Project vicinity are generally one to three stories. These buildings vary in architectural style, height, color, and bulk. Landscaping associated with these buildings generally consists of mature trees, shrubs, and grass that provide visual contrast in terms of form, color, mass, and scale. Viewers of the Project site from these locations include motorists, employees and patrons of local businesses, residents, pedestrians, and bicyclists.

Scenic Highways, Routes, and Corridors

The California Department of Transportation (Caltrans) manages the State's Scenic Highways Program. According to Caltrans' California Scenic Highway Mapping System, the nearest officially designated State scenic highway is I-680, approximately 1 mile east of the Project site (Caltrans 2018). I-580, located just south of the Project site, is an eligible State scenic highway (Caltrans 2018).

I-580, I-680, and San Ramon Road were designated scenic routes by Alameda County in 1966. These are the places from which people traveling through Dublin gain their impression of the City (City of Dublin 2022). I-580 is elevated higher than the Project site, and motorists traveling both directions on I-580 would have peripheral views of the vegetation on Parcel 2 and motorists traveling westbound would have intermittent peripheral views of Parcel 1.

Regional corridors are routes of regional significance and are generally defined as routes that connect Dublin to surrounding communities. Dublin has 12 features (including roadways, trails, and public transportation) that are considered regional corridors. In the vicinity of the Project site, Dublin Boulevard and San Ramon Road are identified by the City as a regional corridor (City of Dublin 2022).

Scenic Vistas

Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting.

There are no designated scenic vistas in Dublin. However, the City of Dublin General Plan identifies the visually sensitive ridgelines located in the open space areas in the Western and Eastern Extended Planning Areas of the City as scenic resources (City of Dublin 2022). In the vicinity of the Project site, ridgelines and open space areas are visible from Dublin Boulevard and I-580.

Light and Glare

The Project area is located in a highly urbanized environment and is surrounded by existing sources of light and glare. These sources of light and glare include streetlights along Dublin Boulevard and I-580; exterior lighting on office and residential buildings; outdoor lighting on surface parking lots; illuminated signage; reflective building material; and vehicular headlights. In addition, the Project site itself is developed and includes existing sources of light and glare from the parking lot and building façade lighting and interior illumination passing through windows.

Glare can emanate from many different sources, some of which include direct sunlight, sunlight reflecting from buildings, and bright outdoor or indoor lighting. Currently, the existing building does not generate substantial glare, as most of the building is constructed of non-reflective materials.

Regulatory Framework

City of Dublin General Plan

Per the City of Dublin General Plan policies, design review would be required for all projects visible from a designated scenic route in order to enhance a positive image of Dublin as seen by through travelers. The following policies related to visual resources are applicable to the proposed Project:

- **Implementing Policy 5.7.1.A.1.** Incorporate County-designated scenic routes, and the Fallon Road extension, in the General Plan as adopted City-designated scenic routes, and work to enhance a positive image of Dublin as seen by through travelers.
- **Implementing Policy 5.7.1.B.1.** Exercise design review of all projects visible from a designated scenic route.

In addition, the Community Design and Sustainability Element of the City of Dublin General Plan contains goals and policies that provide a framework for community development and guidelines for new construction and improvements. The following policies are applicable to the proposed Project:

- **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 (reference: Streetscape Master Plan).
- **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.
- **Implementation Measure 10.5.4.C.** Review development through the Planned Development Regulations and/or the Site Development Review Permit process.

- **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.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.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.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.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 10.7.3.4.A.** Ensure that perimeter areas incorporate appropriate planting, lighting, and signage.
- **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.

City of Dublin Municipal Code

Chapter 8.28, Industrial Zoning District

Parcel 1 and Parcel 2 are zoned as Light Industrial (M1). The M-1 zoning district is intended to provide for the continued use, expansion, and new development of light industrial use types in proximity to major transportation corridors, and to ensure compatibility with adjacent residential and commercial uses. A landscape buffer 10 feet wide is required to be provided along all roadways which shall be adequately watered and maintained. Open areas used for storage or for parking and loading of vehicles are required to be enclosed by a solid wall or fence not less than 6 feet in height with solid entrance and exit gates.

Chapter 8.32, Planned Development Zoning District

Parcel 1 is further zoned as PD under Ordinance No. 80-60. The existing PD Ordinance No. 80-60 for the Project site was approved by the Alameda County Board of Supervisors on July 10, 1980.

The purpose of Chapter 8.32 is to establish a Planned Development Zoning District through which one or more properties are planned as a unit with development standards tailored to the site; provides maximum flexibility and diversification in the development of property; maintains consistency with, and implement the provisions of, the Dublin General Plan and applicable Specific Plans; protects the integrity and character of both residential and non-residential areas of the City; encourages efficient use of land for preservation of sensitive environmental areas such as open space areas and topographic features; encourages use of design features to achieve development that is compatible with the area; and allows for creative and imaginative design that will promote amenities beyond those expected in conventional developments.

Chapter 8.32 requires preparation of a Development Plan for the zoning district. The Development Plan shall establish regulations for the use, development, improvement, and maintenance of the property within the requested Planned Development Zoning District, and may be adopted in stages, as follows:

- **Stage 1 Development Plan.** A Stage 1 Development Plan shall be adopted for the entire Planned Development District site with the reclassification of the property to the Planned Development Zoning District. The plan shall establish the permitted, conditionally permitted, and accessory uses, Stage 1 site plan, site area and proposed densities, maximum number of residential units and non-residential square footages, a phasing plan and a Master Landscaping Plan; statements regarding consistency with General Plan and Specific Plans, and consistency with Inclusionary Zoning regulations, an aerial photo, other information necessary for the review of the proposed project.
- **Stage 2 Development Plan.** A Stage 2 Development Plan for all or a portion of the entire Planned Development District site may be adopted with the Stage 1 Development Plan at the time of the Zoning Ordinance Amendment. A Stage 2 Development Plan shall establish permitted, conditionally permitted, and accessory uses, Stage 2 site plan, site area and maximum proposed densities, maximum numbers of residential units by type and non-residential square footages for each use, development regulations, architectural standards, preliminary landscape plan, other information necessary for the review of the proposed project.

Chapter 8.36, Development Regulations

Chapter 8.36, Development Regulations, of the City of Dublin Municipal Code is intended to secure the necessary provision for light, air, privacy, and safety from fire hazards, and to ensure that development within the City of Dublin provides a high-quality living and working environment consistent with the policies of the City General Plan. It sets forth development regulations relating to lot area, lot square footage per residence, lot width, lot frontage, lot depth, residential use, setbacks, distance between residences, lot coverage, lot lines, yards and height limits.

Chapter 8.72, Landscaping and Fencing Regulations

Chapter 8.72, Landscaping and Fencing Regulations, of the City of Dublin Municipal Code is intended to enhance the aesthetic appearance of developments in all areas of the City by providing standards relating to quality, quantity, and functional aspects of landscaping and landscape screening; increase compatibility between residential and abutting commercial and industrial land uses; reduce the heat and glare generated by development; and minimize visual pollution.

Chapter 8.104, Site Development Review

Chapter 8.104, Site Development Review, of the City of Dublin Municipal Code establishes the procedure for approving, conditionally approving, or denying Site Development Review Permits to promote orderly, attractive, and harmonious development for new development projects that are compatible with surrounding properties and neighborhoods. Adopted Site Development Review Guidelines are used to guide Site Development Review Permit applications.

Project Impacts and Mitigation Measures

(a) Scenic vistas, views (No Impact)

A scenic vista can be impacted by development projects in two ways: (1) the project could directly diminish the scenic quality of the vista by introducing new visual elements that are incompatible with the balance of built and open space, that substantially alter the landform, or that detract from the qualities that contribute to the scenic vista, or (2) the project could block the view corridors or "vista" of the scenic resource from public vantage points. Important factors in determining whether a proposed project would block scenic vistas include the project's proposed height, mass, and location relative to surrounding land uses and travel corridors, as well as to the number of viewers potentially affected and the length of exposure (e.g., residential land uses are typically more sensitive than land uses with only short-term occupants such as employees, students, or visitors).

There are no designated scenic vistas in Dublin. However, the City General Plan identifies the visually sensitive ridgelines located in the open space areas in the Western and Eastern Extended Planning Areas of the City as scenic resources. In the vicinity of the Project site, ridgelines and open space areas are visible from Dublin Boulevard and I-580.

The proposed Project would demolish the existing 62,715 square foot building and develop a new 125,304 square foot building. Because the topography of the Project site, I-580 is elevated above the Project site, and the surrounding area is generally flat, construction of the Project would not obstruct background views of scenic resources, such as views of ridgelines and open space.

Distant views of the Project site would be indistinguishable from the surrounding area due to the density of urban development and flat topography along this portion of Dublin Boulevard. Overall, the Project would be consistent in height, size, and scale with existing buildings in the surrounding area. The new building would be taller and approximately double the size of the existing building. The proposed building may appear bigger and taller for motorists,

pedestrians, visitors to local businesses, or individual residents on neighboring properties; however, the increased building size and height would not substantially affect views of ridgelines located in the open space areas from public vantage points or for a substantial number of City residents. Therefore, the Project would not have a substantial adverse effect on a scenic vista and **no impact** would occur.

(b) Scenic resources (Less Than Significant Impact)

San Ramon Road and Dublin Boulevard are identified by the City as regional corridors. In addition, San Ramon Road is designated a scenic route by Alameda County. San Ramon Road is located approximately 0.3 mile east of the Project site; however, views of the Project site are not visible from this section of the roadway due to intervening urban development.

As shown in Photo 1 above, the Project site is visible from Dublin Boulevard to motorists, pedestrians, visitors to local businesses, or individual residents on neighboring properties. The proposed Project would demolish the existing 62,715 square foot industrial building and develop a new 125,304 square foot building. The building would be set back approximately 135 feet from Dublin Boulevard, separated by landscaped areas and parking stalls. Figure 10. Perspective 1 shows an image of how the Project site would appear from Dublin Boulevard. While the new building may appear bigger and taller for motorists, pedestrians, visitors to local businesses, or individual residents on neighboring properties, the Project would be consistent in height, size, and scale with existing buildings in the surrounding area. Much of the existing landscape and trees on Parcel 1, closest to Dublin Boulevard, would be removed during project construction. However, a total of 85 trees would be added to the site along with other plants, such as sweet bay, strawberry tree, toyon, hopbush, coffeeberry, red yucca, agave, fort night lily, ceanothus and atlas fescue. Over time, as landscaping and trees mature, they would soften and obscure the visibility of the proposed building and parking lot.

The nearest officially designated State scenic highway is I-680, approximately 1 mile east of the Project site. However, views of the Project site are not visible from this section of the roadway due to intervening urban development.

I-580, located approximately 65 feet to the south of the Project site, is an eligible State scenic highway. Photos 2 and 3 illustrate existing views of the Project site from eastbound I-580 and westbound I-580, respectively. As shown in Photos 2 and 3, motorists traveling both directions I-580 would have peripheral views of Parcel 2 and motorist traveling westbound would have intermittent peripheral views of Parcel 1. Existing vegetation on Parcel 2 within the riparian corridor of Dublin Creek and along the I-580 boundary would be retained. Therefore, views of Parcel 2 from I-580 would be the same as existing conditions.

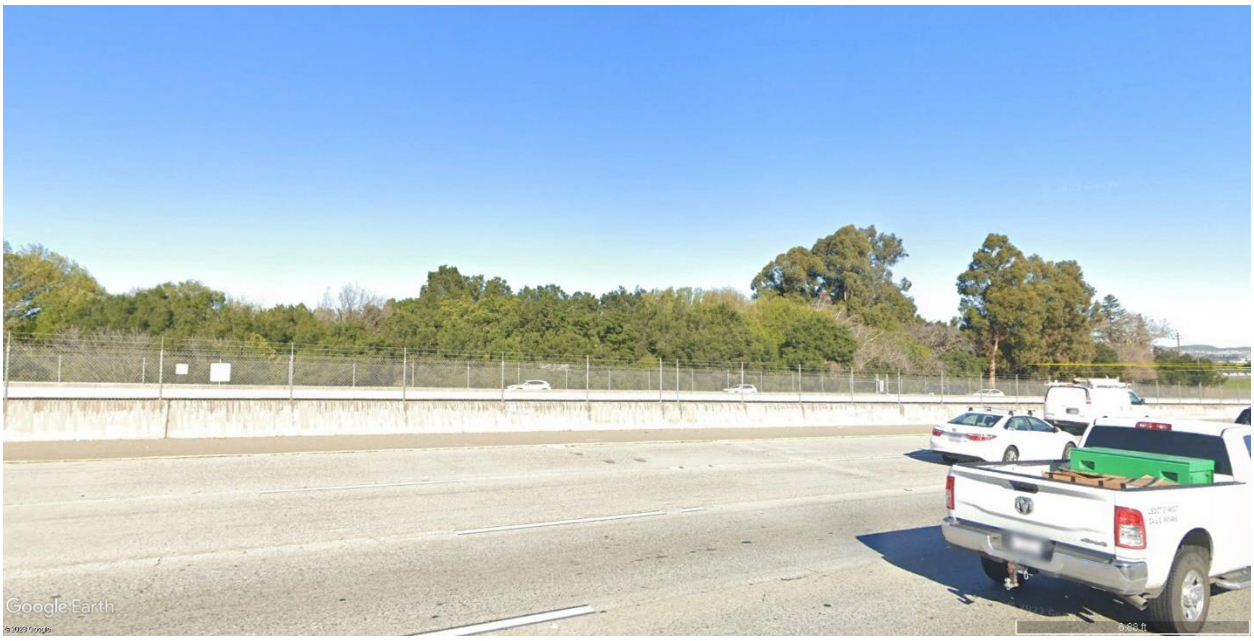

Photo 2: View of Parcel 2 by Motorists Traveling Eastbound on I-580

Photo 3: View of the Project site by Motorists Traveling Westbound on I-580

Views of Parcel 1 are peripheral to the viewer experience of motorists on I-580. Motorists experience direct views of the asphalt roadway, light rail tracks with associated chain link fence dividing the eastbound and westbound lanes of traffic, metal guardrails, overhead lighting, and interstate signage. Figure 11. Perspective shows a view of the Project site with the proposed building from one vantage point of motorists traveling in the westbound direction. As shown in the figure, the southwest corner of the proposed building would be partially visible from this portion of the highway. However, vegetation would provide a soft screen against the building.

As stated above, the Project would be consistent in height, size, and scale with the existing buildings in the surrounding area, and as landscaping and trees mature, they would soften and obscure the visibility of the building and parking lot. Views of the Project site from this location would be intermittent, viewed from above, and experienced at high speeds (generally 65 miles per hour). Therefore, the sensitivity of motorists along I-580 to visual change is low.

Thus, the proposed Project would not substantially damage scenic resources, and this impact would be **less than significant**.

(c) Substantially degrade the visual character of public views of the site or surrounding area (No Impact)

The threshold of significance for development in urbanized areas is limited to whether the Project would conflict with applicable zoning or other regulations governing scenic quality. Impacts to scenic quality within urbanized areas do not include degradation to visual character or the quality of public views of the site and its surroundings.

The proposed Project would demolish the existing 62,715 square foot industrial building and development of a new 125,304 square foot building. Parcel 1 has split zoning with one half of the parcel zoned M-1 Light Industrial) and the other half zoned PD. Parcel 2 is zoned M-1 (Light Industrial). As discussed further in the Dublin Municipal Code (DM) Section 8.28.23, the M-1 zoning district is intended to provide for the continued use, expansion, and new development of light industrial use types. The proposed Project is a permitted use within the M-1 zoning district, however, is not a permitted use in the PD. A Planned Development Rezone would be required for Parcels 1 and 2, which provides development standards beyond those of the M-1 zoning, and a new ordinance would be adopted concurrently. In addition, the proposed Project would prepare Stage 1 and Stage 2 Development Plans simultaneously.[1] With approval of a Planned Development Rezone with a related Stage 1 and Stage 2 Development Plan (DMC Chapter 8.32) and Site Development Review Permit (DMC 8.104), the proposed Project would not conflict with the zoning of the Project site.

The Project would be consistent with the development standards and design criteria provided in DMC Chapter 8.36, including standards for setbacks, lot area, lot width, lot frontage, lot depth, lot coverage, lot lines, and height limits. The building would be set back approximately 135 feet from Dublin Boulevard and cover approximately 31 percent of the site (see Figure 3. Site Plan). The building would be two-stories, with a maximum height of 40 feet (see Figure 4. Elevations). In addition, the proposed Project would not exceed the Dublin Area Village Specific Plan's development potential for the Project site (maximum of 154,202 square feet).

[1] The Stage 1 Development Plan establishes the permitted, conditionally permitted and accessory uses and discusses consistency with the General Plan. The Stage 2 Development Plan establishes development standards/regulations, as well as architectural/landscaping standards. The Planning Commission and the City Council would review the Development Plan, PD zoning district, and ordinance for approval (Gaspare pers. comm., 2023).

The Project would be consistent with General Plan policies regarding landscaping and visual screening (Policies 10.5.3.C, 10.5.3.D, 10.5.3.E, 10.7.3.2.H, 10.7.3.4.A, and 10.7.3.5.A of the Dublin General Plan) and the City's municipal code Chapter 8.28. The total site landscape area would be 99,106 square feet, which includes new and existing landscape. A variety of evergreen shrubs, ornamental trees, grasses, and perennials would be planted around the perimeter of the site and at parking lot areas (see Figure 6B. Landscape Plan Detail). A total of 85 trees would be added to the site along with a variety of other plants. Some of the proposed plants include sweet bay, strawberry tree, toyon, hopbush, coffeeberry, red yucca, agave, fort night lily, ceanothus and atlas fescue. A 3,827 square foot grass bio-swale surrounded by trees and shrubs is proposed in the west corner of the site, and additional bio-swales/bioretention planters are proposed in the northeast and southeast areas of the site.

The Project would be consistent with General Plan policies regarding design of industrial buildings (Policies 10.7.3.1.A, 10.7.3.1.B, and 10.7.3.1.E of the Dublin General Plan). The outside of the building would be made of concrete tilt-up panels painted in various colors including blue, white, and gray. An approximately 6-foot-high retaining wall would be installed along the southern edge of the parking lot and bioretention area in the southwest portion of the site, and lower (approximately 1- to 2-feet-high) retaining walls would be constructed adjacent to the bioretention areas in the southeast and northeast portions of the site. Additional retaining walls would be constructed to create loading dock ramps along the southern façade of the building.

As discussed in more detail in Section 4, "Biological Resources," the Project's proposed tree removal and replacement on Parcel 1 would also comply with the requirements of the City's Heritage Tree Ordinance (DMC Chapter 5.60). Although the proposed removal of trees would change the visual appearance of the Project site, the City's Heritage Tree Ordinance allows for tree removal to accommodate proposed development, provided certain conditions are met. With adherence to the tree removal permit conditions, the Project would not conflict with the City's tree ordinance. All heritage trees in Parcel 2 would be retained.

There are no other regulations governing scenic quality that are applicable to the Project. Because the proposed Project would not conflict with applicable zoning or other regulations governing scenic quality, there would be **no impact**.

(d) Create a new source of substantial light or glare (Less Than Significant)

The light and glare created by development under the Project would be consistent with the levels of lighting and glare currently emitted by the on-site building and office buildings surrounding the Project site and street lighting. Exterior light sources would be designed so as not to create significant light and glare on adjacent properties through the use of concealed sources and/or downcast light fixtures. Because the Project would not introduce new sources of light substantially different from the existing on-site light and from surrounding uses and street lighting, the Project would not generate a substantial new source of light that would adversely affect day or nighttime views in the area.

Glare is caused by light reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on

intensity and direction of sunlight. The outside of the building would be made of concrete tilt-up panels painted in various colors including blue, white and gray. Glazed, non-reflective windows with aluminum framing would be installed on both lower and upper levels of the building. These non-reflective building materials would not result in potential glare impacts within the Project site or surrounding areas, and notably at the street level.

For the reasons described above, the proposed Project would not create substantial new sources of light and glare, and this impact would be **less than significant**.

Source(s)

California Department of Transportation. 2018. California State Scenic Highway Map. Available: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed March 8, 2023.

City of Dublin. City of Dublin General Plan, 2022. Amended February 15, 2022.

Gaspare, Annibale. City of Dublin. Email with Stephanie Osby regarding Stage 1 and Stage 2 Development Plan process and approval of a Planned Development zoning district ordinance. March 20, 2023.

Agricultural and Forestry Resources

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
2.	**AGRICULTURE RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:**				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d)	Result in the loss of forest land or conversion of forest land to non-forest use?				X
	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Environmental Setting

The Project site is not used for agricultural production and is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (NRCS 2019). The surrounding area is characterized by commercial and residential uses. There are no forest or timberland on or near the Project site.

Regulatory Framework

State Regulations

California Department of Conservation Farmland Mapping and Monitoring Program

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program to assess the location, quality, and quantity of agricultural lands and conversion of these lands over time. In each county, the land is analyzed for soil and irrigation

quality, and the highest quality land is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Based on the results of these analyses, the DOC issues maps every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance.

Williamson Act

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments and private landowners to enter into contracts that restrict specific parcels of land to agricultural or related open space use. As a result, landowners receive reduced property tax assessments because they are based upon farming and open space uses rather than market value.

Local Regulations

City of Dublin General Plan

- **Guiding Policy A.1.** States that the City will prevent the premature urbanization of agricultural lands.
- **Implementing Policy B.1.** Requires the City to make findings that the land is suitable for the proposed use and will have adequate urban services and that conversion to an urban use will not have significant adverse effects on adjoining lands remaining under Williamson Act contract. Due to the location of the Project site and its proximity to existing development, existing policies aimed at preserving agricultural uses in the City are not applicable to the proposed Project.

Project Impacts and Mitigation Measures

(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (No Impact)

As described in the Environmental Setting above, the Project site is not used for agricultural production and is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed Project would not convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or any other type of farmland to non-agricultural uses. Therefore, there would be **no impact**.

(b) Conflict with existing zoning for agricultural use or a William Act contract (No Impact)

The Project site is currently zoned as M-1 (Light Industrial) and PD on the City of Dublin Zoning Map (City of Dublin 2022). The Project site is not currently used for agricultural purposes, not zoned for agricultural uses, and is not protected by, or eligible for, a Williamson Act contract. Therefore, the proposed Project would not conflict with existing agricultural zoning or Williamson Act contracts. Therefore, there would be **no impact**.

(c) Conflict with existing zoning for forest land or timberlands (No Impact)

The Project site is currently zoned as M-1 (Light Industrial) and PD on the City of Dublin Zoning Map (City of Dublin 2022). The Project site is not currently used for forest or timberland

purposes, and is not zoned for forest land or timberland uses. Therefore, the proposed Project would not conflict with existing forest or timberland zoning and there would be **no impact**.

(d) Result in loss of forest land or conversion to non-forest use (No Impact)

No forest land exists on the Project site or in the surrounding area. Therefore, the proposed Project would not result in the loss of forest land or the conversion of forest land to non-forest use. Therefore, there would be **no impact**.

(e) Other changes that could result in conversion of farmland or forest land (No Impact)

The proposed Project would not result in other changes to the environment that could indirectly result in the conversion of farmland to non-agricultural purposes or conversion of forest land to non-forest uses. The Project site is in a highly urbanized area and the Project would replace the existing industrial uses at the site with similar industrial uses. Therefore, there would be **no impact**.

Source(s)

City of Dublin. 2022. Dublin Zoning Map as amended through June 21, 2022. Obtained January 24, 2023 from https://www.dublin.ca.gov/DocumentCenter/View/31440/Zoning-Map-June-2022.

Natural Resources Conservation Service. 2019. Web Soil Survey. Obtained on February 2, 2023 from https://websoilsurvey.nrcs.usda.gov/app/.

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Air Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?			X	

Environmental Setting

Air quality is defined by the concentration of pollutants in relation to their impact on human health and the environment. Concentrations of air pollutants are determined by the rate and location of pollutant emissions released by pollution sources, and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, and sunlight. Therefore, ambient air quality conditions within the local air basin are influenced by natural factors such as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

The proposed Project is located in the San Francisco Bay Area Air Basin (SFBAAB), which is comprised of complex terrain types, including coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. Along the County of Alameda's (the county) western coast, temperatures are moderated by the bay, which can act as a heat source during cold weather or cool the air by evaporation during warm weather. It is generally sunnier farther from the coast, although partly cloudy skies are common throughout the summer. Average summer temperatures are mild overnight and moderate during the day. Winter temperatures are typically cool overnight and mild during the day. Highest temperatures are more common inland. Wind speeds vary throughout the county, with the strongest gusts along the western coast, often aided by dominant westerly winds and a bay-breeze effect. Rainfall totals average about 14 to 23 inches per year, with the highest totals in the northern end of the county and atop the Oakland-Berkeley hills (BAAQMD 2021).

Air Pollutants of Concern

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) as being of concern both on a nationwide and statewide level: ozone; carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); lead; and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter (PM_{10}) and PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$). Because the air quality standards for these air pollutants are regulated using human health and environmentally based criteria, they are commonly referred to as "criteria air pollutants." Ozone is not emitted directly into the air but is formed through a series of reactions involving reactive organic gases (ROGs) and nitrogen oxides (NO_X) in the presence of sunlight. ROG and NO_X are referred to as "ozone precursors."

Toxic Air Contaminants

In addition to criteria air pollutants, EPA and CARB regulate hazardous air pollutants, also known as toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that can cause chronic (i.e., long-duration) and acute (i.e., severe but short-term) adverse effects on human health, including carcinogenic effects. TACs can be separated into carcinogens and noncarcinogens based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Noncarcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Sensitive Receptors

Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residences are examples of sensitive receptors. The nearest sensitive receptors include residences located across Dublin Boulevard, approximately 200 feet north of the Project site, a daycare located approximately 300 feet north of the Project site, and residences located approximately 570 feet east of the Project site.

Regulatory Framework

Federal Clean Air Act and National Ambient Air Quality Standards (NAAQS). Pursuant to the Clean Air Act, the EPA has established ambient air quality standards to protect public health and welfare with an adequate margin of safety. These federal standards, known as NAAQS, were developed for the six criteria pollutants described above. NAAQS represent safe levels of each pollutant to avoid specific adverse effects to human health and the environment. Two types of NAAQS have been established, primary and secondary standards. Primary standards set limits to protect public health, especially that of sensitive populations such as asthmatics, children, and seniors. Secondary standards set limits to protect public welfare, including protections against decreased visibility and damage to animals, crops, and buildings.

The Clean Air Act was amended in 1977 to require each state to maintain a State Implementation Plan (SIP) for achieving compliance with the NAAQS. In 1990, the Clean Air Act was amended again to strengthen regulation of both stationary and mobile emission sources.

California Clean Air Act and California Ambient Air Quality Standards (CAAQS). In 1988, the state legislature adopted the California Clean Air Act, which established a statewide air pollution control program. The California Clean Air Act requires all air districts in the state to make progress towards meeting the CAAQS by the earliest practical date. The California Clean Air Act establishes increasingly stringent requirements over time. CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride.

The California Clean Air Act substantially adds to the authority and responsibilities of air districts. The California Clean Air Act designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures.

Bay Area Air Quality Management District (BAAQMD). BAAQMD is the agency responsible for protecting public health and welfare through the administration of federal and state air quality laws and policies in the SFBAAB. BAAQMD's tasks include air pollution monitoring, preparing air quality plans, and promulgating rules and regulations. BAAQMD rules and regulations relevant to the proposed Project include but are not limited to: Regulation 6 (Particulate Matter); Regulation 7 (Odorous Substances); Regulation 8, Rule 3 (Architectural Coatings); Regulation 11, Rule 2 (Asbestos Demolition, Renovation and Manufacturing). Additional rules and regulations may be applicable dependent upon the future specific tenants of the building.

BAAQMD also maintains multiple air quality monitoring stations that continually measure the ambient concentrations of major air pollutants throughout the SFBAAB. Under the California Clean Air Act, BAAQMD is required to develop an air quality attainment plan for nonattainment criteria pollutants within the air district. The 2017 Bay Area Clean Air Plan: Spare the Air and Cool the Climate was adopted on April 19, 2017, and provides a regional strategy to protect public health and protect the climate. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Clean Air Plan builds upon and enhances BAAQMD's efforts to reduce emissions of fine PM and TACs (BAAQMD 2017a).

Attainment of Federal and State Air Quality Standards

Areas are classified under the Federal Clean Air Act and California Clean Air Act as attainment, non-attainment, or maintenance (areas that were previously non-attainment but are currently attainment) for each criteria pollutant based on whether the federal and state air quality standards have been achieved. With respect to the NAAQS, the SFBAAB is designated as a nonattainment area for ozone and $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants. With respect to the CAAQS, the SFBAAB is designated as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants (BAAQMD 2017b).

City of Dublin General Plan. The City of Dublin General Plan, adopted in 1985 and amended in 2022, includes an Environmental Resources Management: Conservation Element. The following policies related to air quality would be applicable to the proposed Project (City of Dublin 2022):

- Request that the Bay Area Air Quality Management District establish an air quality monitoring station in Dublin.
- 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 CEQA level.

Project Impacts and Mitigation Measures

(a) Consistent with air quality plans (Less Than Significant Impact with Mitigation Incorporated)

The Project would implement **Mitigation Measure AQ-1. Implement Basic Construction Emission Control Practices** to comply with BAAQMD's Basic Construction Mitigation Measures during demolition and construction. Therefore, this impact would be **less than significant with mitigation**. This impact is further analyzed in the Focused EIR.

(b) Project emissions (Less than Significant with Mitigation Incorporated)

The Project would implement **Mitigation Measure AQ-1. Implement Basic Construction Emission Control Practices** to comply with BAAQMD's Basic Construction Mitigation Measures during demolition and construction. With the implementation of **Mitigation Measure AQ-1**, construction of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard. During project operation, the proposed Project would result in a net reduction of emissions compared to existing conditions for NOx, PM_{10}, and $PM_{2.5}$, and ROG emissions would not exceed the BAAQMD thresholds of significance. Thus, this impact would be **less than significant with mitigation**. This impact is further analyzed in the Focused EIR.

(c) Expose sensitive receptors to pollutant concentrations (Less Than Significant Impact)

Criteria Air Pollutants

As previously discussed, criteria air pollutants may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. As shown in Table 3: Project Consistency with Applicable CAP 2030 GHG Emissions Reduction Measures, construction activities would result in emissions of criteria air pollutants but at levels that would not exceed the BAAQMD thresholds of significance. Operation of the proposed Project would result in a net reduction in NO_X, PM_{10}, and $PM_{2.5}$ emissions compared to existing conditions because the proposed Project is an energy-efficient, all-electric, building that would generate fewer daily vehicle trips, while the slight increase in ROG emissions would not exceed the BAAQMD thresholds of significance. The construction and operational

thresholds of significance were designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards, which were established using health-based criteria to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution.

The proposed Project is estimated to generate approximately 2 tons of NO_x emissions and less than 1 ton of ROG emissions during demolition and construction activities. As discussed above, NO_x and ROG are ozone precursors. Individuals exercising outdoors, children, and people with lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. Short-term ozone exposure (lasting for a few hours) can result in changes in breathing patterns, reductions in breathing capacity, increased susceptibility to infections, inflammation of lung tissue, and some immunological changes. Chronic exposure to high ozone levels can permanently damage lung tissue (BAAQMD 2017a). Because of the reaction time and other factors involved in ozone formation, ozone is considered a regional pollutant that is not linearly related to emissions (i.e., ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology, and seasonal impacts). Peak ozone concentrations often occur far downwind of the precursor emissions. Thus, ozone is considered a regional pollutant that often affects large areas. There currently is no way to accurately quantify ozone-related health impacts from NO_X and ROG emissions from small projects. These limitations are due to photochemistry and regional model limitations; it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels (SCAQMD 2015). However, because the BAAQMD regional thresholds of significance for NO_X and ROG were established with these factors in mind, the considering that the proposed Project's emissions would be less than the BAAQMD thresholds indicates that the project's NO_X and ROG emissions would not expose sensitive receptors to substantial concentrations of ozone. In addition, the proposed Project would comply with applicable BAAQMD rules, including but not limited to Regulation 6 (Particulate Matter), which reduces the amount of PM entrained in the ambient air. Furthermore, the existing building would be replaced with an energy-efficient, all-electric, building that would generate fewer daily vehicle trips; thus, operation of the proposed Project would also result in a net reduction in regional energy and mobile source criteria air pollutant emissions. Therefore, criteria air pollutant emissions associated with construction and operation of the proposed Project would not expose sensitive receptors to substantial criteria pollutant concentrations.

Toxic Air Contaminants

The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches. The greatest potential TAC emissions would be related to diesel PM emissions associated with activity by heavy-duty construction equipment. The total duration of construction activities is anticipated to be approximately 12 months; the exposure of sensitive receptors to construction emissions would be short term, intermittent, and temporary in nature. Health effects from TACs are often described in terms of individual cancer risk, which is based on a 30-year lifetime

exposure to TACs (OEHHA 2015). Therefore, the total exposure period for construction activities would be approximately 3 percent of the total exposure period used for typical health risk calculations (i.e., 30 years). As shown in Table 3, construction related $PM_{2.5}$ exhaust, a proxy for diesel PM emissions, would be substantially below the thresholds of significance. Construction activities would vary and span across 8.30 acres of Parcel 1. For example, although the nearest sensitive receptors are the surrounding residences located 200 feet and 570 feet away from the Project boundaries, as construction activity occurs across the 8.30 acres of Parcel 1 of the Project site, construction-related emissions would occur at varying distances as far as 1,380 feet from receptors (when construction activities are occurring at the southwestern end of the Project site) and as close as 200 feet (when construction activities are occurring at the northern end of the Project site). Concentrations of mobile-source diesel PM emissions are typically reduced by approximately 60 percent at a distance of 300 feet (100 meters) (Zhu et al. 2002). Therefore, trucks and off-road equipment would not operate in the immediate vicinity of any sensitive receptor for an extended period of time and the potential exposure to TAC emission concentrations would be limited.

Given the construction schedule, varying topography and buffer distances to the nearest sensitive receptors, and the highly dispersive nature of diesel PM emissions, construction of the proposed Project would not expose sensitive receptors to substantial TAC concentrations that could cause short- or long-term health effects. In addition, TAC emission exposure would also be reduced with implementation of CARB regulations, such as the Airborne Toxic Control Measure, which limits idling of diesel-fueled commercial motor vehicles. The demolition and hazardous waste abatement activities would also comply with BAAQMD Regulation 11, Rule 2 (Asbestos Demolition, Renovation and Manufacturing), which would control emissions of asbestos to the atmosphere and reduce exposure of receptors to this TAC.

As discussed previously, the proposed Project would result in fewer daily vehicle trips compared to existing conditions; thus, TAC emissions associated with mobile source emissions (e.g., diesel PM from diesel-fueled vehicles) would be lower than existing conditions. The proposed Project includes a diesel-fired fire pump, which would be a source of TAC emissions. However, the fire pump would be permitted per BAAQMD rules and regulations and would not be operated for extended periods of time; thus, emissions would be limited to infrequent operation and during maintenance and testing activities. Therefore, the proposed Project would not result in an increase in TAC emissions beyond existing conditions and the proposed Project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, this impact would be **less than significant**.

(d) Odors (Less Than Significant)

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose individuals to objectionable odors are deemed to have a significant impact. Typical facilities that generate odors include wastewater treatment facilities, sanitary landfills, composting

facilities, petroleum refineries, chemical manufacturing plants, and food processing facilities (BAAQMD 2017c).

Construction activities associated with the proposed Project could result in short-term odor emissions from asphalt paving activities and diesel exhaust associated with construction equipment. The proposed Project would use typical construction techniques; odors would be typical of most construction sites and limited to duration of construction. Furthermore, nuisance odors are regulated under the BAAQMD's Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor complaint. Regulation 7 places general limitations on odorous substances, and specific emission limitations on certain odorous compounds. Since the proposed Project involves the redevelopment of an existing industrial building with a new industrial building, the proposed Project would not introduce a new odor-generating source. Thus, the proposed Project would not result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people. This impact would be **less than significant**.

Source(s)

Bay Area Air Quality Management District (BAAQMD). 2017a. Final 2017 Clean Air Plan: Spare the Air: Cool the Climate. Available online: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed February 2023.

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Biological Resources

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.	**BIOLOGICAL RESOURCES. Would the project:**				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Environmental Setting

This section describes the existing biological setting within the Project site, which consists of two adjacent parcels, Parcel 1 and Parcel 2. The focus of the analysis was based on the areas potentially directly or indirectly affected by construction of the Project, referred to herein as the Project footprint. The Project footprint is exclusively in Parcel 1.

The City of Dublin is characterized by a diverse array of wildlife and plant species, with two discrete habitat types—the flatter urbanized portion of the City and the surrounding oak woodland and California annual grassland. The Project site is located within the urbanized area, which exhibits plant and animal species typical of urbanized areas including a combination of native and introduced trees, grasses and shrubs used for landscaping purposes.

The proposed Project footprint is completely developed with buildings, hardscape, and landscaped areas. Vegetation within landscaped areas of the footprint is comprised of sod, various ornamental shrubs, various ornamental tree species, as well as native trees such as California Bay (*Umbellularia californica*), coast live oak trees (*Quercus agrifolia*), and California buckeye (*Aesculus californica*). No natural habitats (habitats with naturally occurring vegetation) occur within the Project footprint.

The Project site is primarily developed with buildings, hardscape, and landscaped areas associated with the existing Hexcel buildings; however, Dublin Creek is located to the south of the Project footprint approximately along the boundary of Parcel 1 and Parcel 2. Dublin Creek in this location contained less than 1 foot of water during AECOM's site visit on December 12, 2022. The banks of this feature are natural, but this feature runs underground for long stretches immediately east and west of the project.

Vegetation Communities

Vegetation communities within the Project footprint are limited to landscaped areas comprised of sod, various ornamental shrubs, various ornamental tree species, as well as a large number of native trees such as coast live oak trees, California Bay, and California buckeye. To the south of the Project footprint and on Parcel 2, is riparian habitat associated with Dublin Creek.

Wildlife

Wildlife in the Project site is likely to be limited to those species easily habituated to human activity, and which typically occupy urban areas or interfaces between urban and open space areas. Larger fauna may include raccoon (*Procyon lotor*) and skunk (*Mephitis mephitis*), while smaller fauna would include species such as western fence lizards (*Sceloporus occidentalis*), southern alligator lizard (*Elgaria multicarinata*), deer mice (*Peromyscus maniculatus*), and Botta's pocket gopher (*Thomomys bottae*).

A wide variety of bird species likely utilizes the riparian corridor of Dublin Creek to the south of the Project footprint, as well as the ornamental vegetation and trees within the Project footprint. These species include red-tailed hawk (*Buteo jamaicensis*), house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), bushtit (*Psaltriparus minimus*), western bluebird (*Sialia mexicana*), American robin (*Turdus migratorius*), Anna's hummingbird (*Calypte anna*), among others.

Regulatory Framework

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter any migratory bird, or the

parts, nests, or eggs of such bird, except under the terms of a valid federal permit. Migratory bird species protected by the act are listed in the Code of Federal Regulations (CFR) in 50 CFR Part 10.13. The U.S. Fish and Wildlife Service has statutory authority for enforcing the Migratory Bird Treaty Act (16 United States Code Sections 703-712).

Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (ESA) (16 United States Code Section 1531 et seq.) provides a regulatory program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The U.S. Fish and Wildlife Service and National Marine Fisheries Service are the lead agencies responsible for implementing the ESA. The U.S. Fish and Wildlife Service maintains a list of endangered species that includes birds, insects, fish, reptiles, mammals, crustaceans, plants, and trees. The U.S. Fish and Wildlife Service and/or National Marine Fisheries Service requires authorization for any actions that they authorize, carry out, or fund, that may jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat.

California Endangered Species Act

The California Endangered Species Act (CESA) conserves and protects animals at risk of extinction. Plants and animals may be designated as threatened or endangered under CESA after a formal listing process by the California Fish and Game Commission. A CESA-listed species may not be killed, possessed, purchased, or sold without authorization from the California Department of Fish and Wildlife.

California Fish and Game Code Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code designate 37 species of wildlife as Fully Protected in California. Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take, except for the authorized collection of these species for necessary scientific research and relocation of bird species for the protection of livestock.

California Fish and Game Code Section 2081 Incidental Take Permits

Section 2081(b) of the California Fish and Game Code allows the California Department of Fish and Wildlife to authorize take of CESA-listed species categorized as endangered, threatened, candidate, or rare plant species if that take is incidental to otherwise lawful activities, and if certain conditions are met. Section 2081(b) permits are commonly referred to as an Incidental Take Permit.

City of Dublin Municipal Code

The City of Dublin Municipal Code Chapter 5.60: “the Heritage Tree Ordinance” (Ord. 5-02 § 2 (part): Ord. 29-99 § 1 (part)), requires that a Tree Removal permit from the Director be acquired prior to the removal of heritage trees. Heritage trees include:

1. *"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 measured at four (4) feet six (6) inches above natural grade;*
2. *A tree required to be preserved as part of an approved development plan, zoning permit, use permit, site development review or subdivision map;*
3. *A tree required to be planted as a replacement for an unlawfully removed tree."*

In addition, all applications for demolition, grading, or building permits on property containing one or more heritage trees shall prepare a tree protection plan pursuant to Section 5.60.090.

City of Dublin General Plan

The City of Dublin General Plan Chapter 7 Environmental Resources Management Conservation Element provides guidance for the protection of biological resources in Dublin and includes objectives, goals, and policies regarding biological resources.

The following goals and policies from the City's General Plan relating to biological resources apply to the Project:

- **Guiding Policy 7.2.1A1:** Protect riparian vegetation as a protective buffer for stream quality and for its value as a habitat and aesthetic resource
- **Implementing Policy 7.3.2B1:** Require erosion control plans for proposed development. Erosion control plans shall include recommendations for preventing erosion and scour of drainageways, consistent with biological and visual values.
- **Implementing Policy 7.4.1B2:** Enact and enforce the Heritage Tree Ordinance

Project Impacts and Mitigation Measures

(a) Substantial adverse effect on candidate, sensitive, or special status species (*Less Than Significant Impact with Mitigation Incorporated*)

Noise and vibration from proposed construction activities associated with the Project could disturb birds that are nesting on and near the Project site. In addition, the Project would involve the removal of approximately 85 landscape trees within the Project footprint, which could be used by birds during the nesting season. If a tree containing an active nest were to be removed during construction, such removal would result in nest destruction and failure. Due to this potential for loss of nests, and due to potential disturbance of nesting birds from noise and vibration during Project construction, the impact to nesting birds would be potentially significant. The implementation of **Mitigation Measure BIO-1: Nesting Bird Avoidance Measures** would bring this impact down to a less than significant impact. This impact is further analyzed in the Focused EIR.

(b) Substantial adverse effect on any riparian habitat or other natural community (*Less Than Significant Impact*)

No riparian habitat or other sensitive natural communities are located within the Project footprint; therefore, Project construction or operation would not directly impact riparian habitat or other sensitive natural communities. Dublin Creek is located approximately 5 feet south of the Project footprint on Parcel 2; however, proposed construction activities and continued operation of the site would not remove, fill, or hydrologically interrupt this feature.

Construction would occur within 5 feet of riparian trees within Dublin Creek; however, construction activities will occur on existing paved areas (parking lot), and no construction equipment will enter Dublin Creek and associated riparian habitat. No trees or vegetation along Dublin Creek would be disturbed during construction. In the event that runoff from the Project or accidental spills entered Dublin Creek, sedimentation or the introduction of pollutants to Dublin Creek would constitute a potentially significant impact. As discussed further in Section 9, Hydrology, the Project would avoid sedimentation or the introduction of pollutants to Dublin Creek through the required implementation of erosion and sediment control measures and the implementation of BMPs specified in the Stormwater Pollution Prevention Plan (SWPPP) during construction, which would protect water quality.

Disturbance from noise and vibration (see Section 12) on wildlife could result during construction activities. However, these impacts would be minimal and only for a temporary period of time during construction. Furthermore, construction of the Project does not have the potential to result in introduction of non-native weeds to the riparian corridor of Dublin Creek. Thus, no substantial indirect effects to the Dublin Creek Riparian corridor are expected.

Therefore, the Project would have **less than significant impact** on riparian habitat and sensitive natural communities. No mitigation measures are required.

(c) Substantial adverse effect on wetlands (*Less Than Significant Impact*)

No wetlands or other waters of the U.S. or state are located within the Project footprint; therefore, Project construction or operation would not directly impact wetlands and other waters. Dublin Creek is a water of the U.S. and water of the State and is located immediately south of the Project footprint. However, the Project footprint adjacent to Dublin Creek is located in an existing paved parking lot. Proposed construction activities and continued operation of the site would not removal, fill, or hydrologically interrupt this feature. No development would occur within 5 feet of top of bank.

As discussed in Impact b above, the Project would avoid sedimentation or the introduction of pollutants to Dublin Creek through the required implementation of erosion and sediment control measures and the implementation of BMPs specified in the SWPPP during construction, which would protect water quality. Construction of the Project does not have the potential to result in introduction of non-native weeds to the riparian corridor of Dublin Creek. Furthermore, vibration from construction would be minimal and temporary as described in Section 12.

Therefore, the Project would have **less than significant impact** on wetlands and waters of the U.S. or state.

(d) Interfere or impede the movement of migratory fish or wildlife (Less Than Significant Impact with Mitigation Incorporated)

The riparian corridor associated with Dublin Creek could be used as foraging habitat for common bats. If construction were to remove trees containing bats during the maternity or winter season, bat mortality could occur, and the impact to common bat species would be potentially significant. With the implementation of **Mitigation Measure BIO-2: Roosting Bat Surveys and Avoidance**, potential Project impacts to wildlife movement, migration, or nursery sites would be reduced to a **less than significant impact**. This impact is further analyzed in the Focused EIR.

(e) Conflict with local policies or ordinance include tree preservation (*Less Than Significant Impact*)

Construction of the Project would require the removal of 85 trees. Of those trees, two trees are "Heritage Trees" as defined by the City of Dublin's municipal code and "Heritage Tree Ordinance." These trees are located at the northwest boundary of the Project footprint and at the center of the project footprint. The tree at the northwest boundary of the Project footprint is a valley oak (*Quercus lobata*) with a diameter breast height (DBH) of 31 inches, and the tree at the center of the Project footprint is a western sycamore (*Platanus racemosa*) with a DBH of 28.2 inches.

A tree removal permit would be required for the removal of these two heritage trees. The tree removal permit application would require an arborist's report, tree preservation plan, and a tree replacement plan. The Project applicant has conducted an arborist survey and developed an arborist report, which will be attached to the application.

The tree protection plan will be developed to ensure that all other heritage trees on the Project footprint are adequately protected from potential harm during construction. The tree replacement plan will include a plan for replacement of removed Heritage Trees, including a plan for "1 or more replacement trees be planted of a designated species, size and location," per the requirements of the Heritage Tree Ordinance.

The Dublin General Plan also requires that developers "*protect riparian vegetation as a protective buffer for stream quality and for its value as a habitat and aesthetic resource."* The project would avoid the riparian corridor south of the Project footprint, and there would be no impact to riparian vegetation.

With adherence to the tree removal permit conditions, the Project would not conflict with the City's tree ordinance or the Dublin General Plan, and potential impacts would be **less than significant.**

(f) Conflict with adopted habitat conservation or natural community conservation plans (*No Impact*)

The Project is not located within a Habitat Conservation Plan or Natural Communities Conservation Plan Permit Area. Because there are no Habitat Conservation Plans or Natural Communities Conservation Plans that apply to the Project site, the Project would not conflict with any such plans. Therefore, there would be **no impact**.

Source(s)

California Department of Fish and Wildlife Service (CDFW). 2023. Rarefind 5, a program created by the California Department of Fish and Wildlife that allows access to the California Natural Diversity Database. Reviewed January 17, 2023.

United States Fish and Wildlife Service (USFWS). 2023. IPaC Information for Planning and Consultation. Available online at: https://ecos.fws.gov/ipac/. Accessed on January 17, 2023.

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Cultural Resources

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
5.	**CULTURAL RESOURCES. Would the project:**				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines section 15064.5?	X			
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	X			
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	X			

Environmental Setting

The Project site is located south of Dublin Boulevard with the Dublin Heritage Park and Museums and Dublin Pioneer Cemetery to the east; Interstate (I-)580 to the south; and a business park to the west.

Historic-age built environment resources on the Project site consist of the Hexcel Corporation research and development (R&D) facility, landscaping, and parking. The Contemporary/Brutalist style facility has a roughly L-shaped plan and was largely constructed in two phases dating to 1962 and 1967, with small additions and alterations in the mid-1980s.

A full archaeological and historical context for the project site is provided in the Focused EIR.

Regulatory Framework

Cultural resources in California are protected by a number of regulations. The following provides a brief outline of the regulations, policies, and ordinances that are applicable to the proposed project.

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) (16 United States Code 470) and its implementing regulations (36 Code of Federal Regulations [CFR] 800) establish a program for the preservation of historic properties throughout the United States and provides a framework for identifying and treating historical and archaeological resources under the CEQA. Section 106 of the NHPA requires that federal projects or projects under federal jurisdiction consider the effect of an undertaking on properties eligible for or included in the National Register of Historic Places (NRHP). Historic properties that are listed in or eligible for the NRHP are considered historical resources for the purposes of CEQA.

National Register of Historic Places

Historic properties are those significant cultural resources that are listed in or are eligible for listing in the NRHP per the criteria listed below (36 CFR 60.4):

The quality of significance in American, state, and local history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

a. Are associated with events that have made a significant contribution to the broad patterns of our history;

b. Are associated with the lives of persons significant in our past;

c. Embody the distinctive characteristics of a type, period, or method of installation, or 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;

d. Have yielded, or may be likely to yield, information important in prehistory or history.

Ordinarily, cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP, unless they satisfy certain conditions. In general, a resource must be 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

Listing in the NRHP does not entail specific protection of, or assistance for a property. However, listing does guarantee the property's recognition during planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

State

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "historical resources," "unique archeological resources," and "tribal cultural resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archeological resources.

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC § 21084.1; determining significant impacts to historical and archeological resources is described in the CEQA Guidelines, § 15064.5[a] and [b]). Per the CEQA Guidelines, section 15064.5(a), historical resources include the following:

(1) A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR) (PRC § 5024.1).

(2) A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

(4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Cal. Pub. Resources Code § 5020.1(k)), or identified in a historical resources survey (meeting the criteria in Cal. Pub. Resources Code § 5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Cal. Pub. Resources Code§§ 5020.1(j) or 5024.1.

Non-Unique Archeological Resources

Under CEQA, archeological resources are presumed non-unique unless they meet the definition of "unique archeological resources" (Cal. Pub. Resources Code § 21083.2[g]). Under CEQA, an impact on a non-unique archeological resource is not considered a significant environmental impact.

Unique Archeological Resources

Archeological resources can sometimes qualify as "unique archeological resources" that are not "historical resources." (CEQA Guidelines, Section 15064.5(c)(3)). PRC, Section 21083.2(g) defines a unique archeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If a project can be demonstrated to cause damage to a unique archeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

California Register of Historical Resources

The CRHR is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The CRHR helps government agencies identify, evaluate, and protect California's historical resources, and indicates which properties are to be protected from substantial adverse change (Pub. Resources Code, Section 5024.1(a)). The CRHR is administered through the California Office of Historic Preservation (OHP) which is part of the California State Parks system. A cultural resource is evaluated under four CRHR criteria to determine its historical significance. A resource must be significant at the local, state, or national level in accordance with one or more of the following criteria set forth in the CEQA Guidelines Section 15064.5(a)(3) and Public Resources Code section 5024.1:

1. It is associated with events that have made a significant contribution to the broad pattern of California's history and cultural heritage;
2. It is associated with the lives of persons important in our past;
3. 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; or
4. It has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, the CRHR requires that sufficient time must have passed to allow a "scholarly perspective on the events or individuals associated with the resource." The CRHR also requires a resource to possess integrity, which is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

Codes Governing Human Remains

Section 7050.5 of the Health & Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must then contact the California Native American Heritage Commission (NAHC), which has jurisdiction pursuant to Public Res. Code § 5097. The NAHC, pursuant to PRC Section 5097.98, will immediately notify the person it believes to be most likely descendant (MLD), from the deceased Native American person so they can inspect the burial site and make recommendations for appropriate treatment or disposition.

Local

City of Dublin General Plan

The City of Dublin General Plan, Chapter 7 Environmental Resources Management Conservation Element, provides guidance for the protection of archaeological and historic resources in Dublin and guiding policies related to historic and cultural resources are as follows:

Guiding Policy 7.7.1A.1: Preserve Dublin's historic structures.

Seven sites in the Primary Planning Area are listed in the California Archaeological Inventory, Northwest Information Center, at Sonoma State University including the church and school on the grounds of the Dublin Heritage Park and Museums. As many as a dozen potentially significant historic and prehistoric sites have been identified in the Eastern Extended Planning Area.

Guiding Policy 7.7.1A.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.

Guiding Policy 7.7.1A.3: Preserve the Green Store.

The Green Store is a recognized historical resource and has been used as a church since 1989. This use can remain as long as the landowner(s) wish to continue its operation. The Parks/ Public Recreation designation on the General Plan Land Use Map illustrates the long-term potential for expansion of the Dublin Heritage Park and Museums to include this historic structure and the property it is on and is not intended to affect or change the current church use or its continued operation as a religious land use under a valid conditional use permit.

Dublin Village Historic Area Specific Plan

The Project site is located within the Dublin Village Historic Area Specific Plan boundary. The Dublin Village Historic Area Specific Plan was adopted in 2006 and updated in 2014. Applicable goals and objectives of the Dublin Village Historic Area Specific Plan related to historic and cultural resources are as follows:

Goal 1: Preserve and protect the valuable historic resources within the Dublin Village Historic Area.

Objective 1.1: Identify Dublin's historic resources and adopt a formal Historic Resources Inventory.

Objective 1.2: Identify mechanisms to protect properties on the Historic Resources Inventory from being destroyed or altered to the point of removing their historic value.

Objective 1.3: Identify incentives to encourage the preservation and enhancement of privately-owned historic resources.

Objective 1.4: Pursue formal designation and recognition of Dublin's historic resources through the California State Office of Historic Preservation and National Registry.

Objective 1.5: Work cooperatively with property owners to rehabilitate Alamilla Springs.

Objective 1.6: Ensure that improvements and renovations to publicly owned historic resources are done according to the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Goal 2: Guide the design of future development to reinforce the unique historic qualities and design elements that once defined Dublin Village.

Objective 2.1: Create design guidelines for residential, commercial, and mixed-use development on private property.

Objective 2.2: Create design guidelines that provide direction for future streetscape improvements in the public right of way.

Objective 2.3: Create guidelines that provide direction on the preferred preservation and rehabilitation techniques for properties on the Historic Resources Inventory.

Dublin Historic Resources Inventory

The Dublin Historic Resources Inventory (HRI) was created when the Dublin Village Historic Area Specific Plan was adopted by the Dublin City Council in 2006. The HRI was established to "recognize those few remaining resources that have a place in Dublin's history, including those resources that might be significant to the immediate community but not significant at the state or federal level" (City of Dublin Community Development Department 2014: 27).

The HRI consists of resources that were found eligible for listing in the NRHP and the CRHR, or only having local significance, from the survey efforts undertaken in *Dublin Historic Resources Identification Project* that was finalized in 2004 by Page & Turnbull, Inc. The HRI includes only seven resources, three of which are near the 6600 block of Donlon Way: St. Raymond's Church, Murray Schoolhouse, and the Pioneer Cemetery, which have been combined as the "Dublin Heritage Center." The Pioneer Cemetery is adjacent to the Hexcel property, and historic documents suggest it extends into the Project parcel (VerPlanck 2003).

The Dublin Village Historic Area Specific Plan did not establish goals or policies for maintaining or adding properties to the HRI. No guidelines were provided to reevaluate properties in the Dublin Village Historic Area that were less than 50 years old at the time the survey was conducted in 2004, nor any significance criteria or mechanisms for nominating or adding properties to the HRI.

Previous CEQA Documents

The City of Dublin hired the archaeological firm William Self Associates, Inc. (WSA) in 2003 to prepare an *Archaeological Assessment Report of the Donlon Way Specific Plan* (later renamed the Dublin Village Historic Area Specific Plan area). A record search at the Northwest Information Center (NWIC), conducted by WSA, did not identify any previously recorded archaeological sites within the Specific Plan area boundaries, but one new archaeological site was recorded during the pedestrian survey and Archeological High Probability areas were also identified within the Specific Plan area boundaries. The *Archaeological Assessment Report* concluded that there is a moderate-to-high-probability of identifying Native American archeological resources and a high-probability of encountering historic-period archeological resources within the Specific Plan area boundaries.

The City of Dublin hired the architectural firm Page & Turnbull, Inc. in 2003 to prepare the *Dublin Historic Resources Identification Project* that was finalized in 2004. The city contracted

with Page & Turnbull to identify and map historic resources in an approximately 38-acrea area for a future Specific Plan for the Donlon Way area (later renamed the Dublin Village Historic Area Specific Plan) and to prepare preservation recommendations. Page & Turnbull prepared a historic context of the Dublin Village area and recorded all of the properties in the survey area on Department of Parks and Recreation (DPR) 523 A and B forms. The Hexcel Corporation R&D facility on the Project site was recorded as part of this effort on December 10, 2023. At that time, the facility was not considered old enough (at least 50 years old) to be considered a potential historical resource under CEQA. Additionally, while the historic evaluation recorded on the Department of DPR 523 series forms did contain a thorough historic context statement, it did not address the four eligibility criteria for either the NRHP or the CRHR, but merely concluded that the property lacked architectural or historical significance to be eligible.

The Dublin Village Historic Area Specific Plan was adopted by the Dublin City Council on August 1, 2006, under Resolution No. 149-06 and relied on the findings of the *Archaeological Assessment Report of the Donlon Way Specific Plan* and the *Dublin Historic Resources Identification Project*. The approximately 38-acre Specific Plan area included the two project site parcels. Subsequently, three Specific Plan addendum and amendments have been prepared for the Specific Plan. City Council determined that no new significant impacts were identified by the addendums or amendments, and no further environmental analysis was required.

As part of this Initial Study, AECOM prepared a historical resource evaluation of the Hexcel Corporation's 1960s-constructed R&D facility on the Project site for eligibility for listing in the CRHR as a potential historical resource for the purposes of CEQA. AECOM found the facility eligible for listing in the CRHR under Criterion 1, because it is significant at the national level for its associations within the Man in Space historic context published by the National Park Service and is, therefore, considered a historical resource for the purposes of CEQA.

Project Impacts and Mitigation Measures

(a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines section 15064.5? (Potentially Significant Impact)

The proposed Project would result in the demolition of the existing Hexcel Corporation R&D facility, which is a historical resource for the purposes of CEQA. As proposed, the Project impact to this historical resource would be **potentially significant.** This potentially significant impact is further analyzed in the Focused EIR.

(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5? (Potentially Significant Impact)

The proposed Project would include excavation of much of the Hexcel Corporation R&D facility property, which is adjacent to the Dublin Village Historic Settlement, recorded as a historical resource for the purposes of CEQA. As such, there is potential for previously unrecorded archaeological resources associated with the historic settlement to be within the Hexcel Property. Additionally, the Hexcel property is adjacent to the marked boundary of the Pioneer Cemetery. Marked grave sites in the cemetery are within five feet of the Hexcel property fence. Historic documents suggest that the cemetery was larger than the currently marked boundary (VerPlanck 2003). For these reasons, it is likely that the cemetery extends beneath the Hexcel

parking lot. If previously unrecorded archaeological resources associated with the historic district are present within the Hexcel property and/or if burials extend beyond the marked boundary of the adjacent Pioneer Cemetery, the Project impact to archaeological resources would be **potentially significant.** This potentially significant impact is further analyzed in the Focused EIR.

(c) Disturb any human remains, including those interred outside of dedicated cemeteries? (Potentially Significant Impact)

The proposed Project would include excavation of the parking lot to the south of the Hexcel Corporation R&D facility, which is adjacent to the marked boundary of the Pioneer Cemetery. There is a high probability that the cemetery boundary exceeds the currently marked property line and extends beneath the Hexcel parking lot (VerPlanck 2003). If so, the Project has the potential to disturb human remains. The Project impact could be **potentially significant.** This potentially significant impact is further analyzed in the Focused EIR.

Source(s)

City of Dublin Community Development Department. 2014 (updated). Dublin Village Historic Area Specific Plan*.* Adopted by the Dublin City Council on August 1, 2006, Resolution No. 149-06. Available online: https://www.dublin.ca.gov/DocumentCenter/View/7780/DVHASP-FULL-PDF-10714?bidId=. Accessed April 2023.

____. 2022 (amended). General Plan. Available online: https://www.dublin.ca.gov/DocumentCenter/View/30287/General-Plan-Update-04192022-WEB. Accessed April 2023.

Page & Turnbull, Inc. 2004. *Dublin Historic Resources Identification Project (Final).* Prepared for the City of Dublin. On file at the Northwest Information Center in Rohnert Park, California.

VerPlanck, Christopher. 2003. Pioneer Cemetery Site Record (P-01-010637). On file at the Northwest Information Center in Rohnert Park, California.

William Self Associates, Inc. 2003. *Archaeological Assessment Report, Donlon Way Area Specific Plan, City of* Dublin*, Alameda County, California.* Prepared for the City of Dublin. On file at the Northwest Information Center in Rohnert Park, California.

Energy

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
13.	**ENERGY. Would the project:**				
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?		X		
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Environmental Setting

The proposed Project is located in the City of Dublin within Alameda County. Electric and natural gas services to Alameda County are provided by Pacific Gas & Electric Company (PG&E). In 2021, PG&E delivered approximately 78,588 gigawatt-hours of electricity within its service area (California Energy Commission 2023a). PG&E's total natural gas throughput was approximately 4,467 million therms in 2021 (California Energy Commission 2023b). PG&E provides power from a variety of sources: biomass and biowaste, geothermal, small and large hydroelectric, solar, wind, natural gas, and nuclear (PG&E 2021).

In 2018, East Bay Community Energy (EBCE) began serving Dublin residential, business, and municipal electricity customers. To help meet the greenhouse gas (GHG) emissions reductions goals set in the City of Dublin's Climate Action Plan 2030 and Beyond (discussed below), the Dublin City Council voted in January 2021 to set the default electricity option for Dublin residences to EBCE's Renewable 100 service, which began in January 2022, and is sourced from California wind and solar facilities, including a new wind farm in Livermore. Customers can change their EBCE service or return to PG&E service at any time. All municipal electric accounts in Dublin have been powered by Renewable 100 since July 2019 (City of Dublin 2023).

Transportation, such as gasoline and diesel fuel consumption, is also an energy-consuming sector, and applicable to the proposed Project (diesel and gasoline fuel consumption during construction and operational activities). Transportation is the largest energy-consuming sector in California, accounting for approximately 34 percent of all energy use in the state in 2020 (EIA 2022a). Historically, gasoline and diesel fuel accounted for nearly all transportation-related energy demand; now, however, numerous transportation power options are available, including ethanol, natural gas, electricity, and hydrogen. Nonetheless, despite advancements in alternative fuels and clean-vehicle technologies, gasoline and diesel remain the primary fuels used for transportation in California, with 12.7 billion gasoline gallon equivalents of petroleum (GGEs) consumed in 2021 and 3.7 billion GGEs of diesel consumed in 2020 (DOE 2023).

Regulatory Framework

Energy Policy and Conservation Act of 1975. The Energy Policy and Conservation Act of 1975 established the first fuel economy standards for on-road motor vehicles sold in the United States. The National Highway Traffic and Safety Administration is responsible for establishing standards for vehicles and revising the existing standards. The Corporate Average Fuel Economy (CAFE) program was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA administers the testing program that generates the fuel economy data.

Energy Policy Acts of 1992 and 2005. The Energy Policy Act of 1992 was enacted to reduce dependence on imported petroleum and improve air quality by addressing all aspects of energy supply and demand, including alternative fuels, renewable energy, and energy efficiency. This law requires certain federal, state, and local government and private fleets to purchase alternate fuel vehicles. The act also defines "alternative fuels" to include fuels such as ethanol, natural gas, propane, hydrogen, electricity, and biodiesel.

The Energy Policy Act of 2005 was enacted on August 8, 2005. This law set federal energy management requirements for energy-efficient product procurement, energy savings performance contracts, building performance standards, renewable energy requirements, and use of alternative fuels. The Energy Policy Act of 2005 also amends existing regulations, including fuel economy testing procedures.

Energy Independence and Security Act of 2007. Signed into law in December 2007, the Energy Independence and Security Act was enacted to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the federal government's energy performance; and increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The Energy Independence and Security Act included the first increase in fuel economy standards for passenger cars since 1975. The act also included a new energy grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs.

Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards. On May 7, 2010, the final Light-Duty Vehicle GHG Emissions Standards and CAFE Standards were published in the Federal Register. Phase 1 of the emissions standards required that model year 2012–2016 vehicles meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO_2) per mile, which is equivalent to 35.5 miles per gallon, if the automobile industry were to meet this CO_2 level solely through fuel economy improvements.

On March 31, 2022, the National Highway Traffic Safety Administration finalized the CAFE Standards for model years 2024-2026. The final rule establishes standards that would require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025, and 10 percent annually for model year 2026.

Heavy-Duty Engine and Vehicle Standards. In September 2011, in response to a Presidential Memorandum issued in May 2010, EPA in coordination with National Highway Traffic Safety

Administration (NHSTA) issued GHG emissions and fuel economy standards for medium and heavy duty trucks manufactured in model years 2014-2018, known as Phase 1 GHG Rule.

In October 2016, EPA and NHTSA jointly finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution to reduce the impacts of climate change, while bolstering energy security and spurring manufacturing innovation.

On December 20, 2022, EPA adopted a final rule, "Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards," that sets stronger emissions standards to further reduce air pollution, including pollutants that create ozone and particulate matter, from heavy-duty vehicles and engines starting in model year 2027. The final program includes new, more stringent emissions standards that cover a wider range of heavy-duty engine operating conditions compared to today's standards, and it requires these more stringent emissions standards to be met for a longer period of time of when these engines operate on the road. This final rule is consistent with President Biden's Executive Order, "Strengthening American Leadership in Clean Cars and Trucks" and is the first step in the Clean Trucks Plan.

City of Dublin General Plan. The City of Dublin General Plan, adopted in 1985 and amended in 2022, includes an Environmental Resources Management: Energy Conservation Element. The following implementing policies related to energy efficiency and conservation in new development would be applicable to the proposed Project (City of Dublin 2022):

- 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, [light emitting diode] 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.
- New development projects shall install LED streetlights in compliance with the City's LED light standard.
- In new commercial and residential parking lots, require the installation of conduit to serve EV parking spaces to enable the easier installation of future charging stations.
- 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).
- 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.
- 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.
- Promote and encourage photovoltaic demonstration projects in association with new development.

City of Dublin Climate Action Plan 2030. The City of Dublin adopted its Climate Action Plan 2030 and Beyond (CAP 2030) in September 2020, as a guiding document to identify ways in which the community and City can reduce GHG emissions, meet Dublin's long-term climate action goals, and promote a healthy, prosperous community. The CAP 2030 focuses on the following strategies: 100 percent renewable and carbon-free electricity; building efficiency and electrification; sustainable mobility and land use; materials and waste management; and municipal leadership measures (City of Dublin 2020).

Project Impacts and Mitigation Measures

(a) Wasteful, inefficient, or unnecessary consumption of energy resources (Less Than Significant Impact With Mitigation Incorporated)

The proposed Project activities would increase energy consumption for the duration of construction in the form of fossil fuels. However, energy consumption associated with construction of the proposed Project would not be inefficient, wasteful, or unnecessary with **Mitigation Measure AQ-1** incorporated. During project operation, the proposed Project would result in a net reduction in energy consumption, primarily related to improved building energy standards and eliminating natural gas infrastructure. This impact would be **less than significant with mitigation. This impact** is further analyzed in the Focused EIR.

(b) Conflict with local plan for renewable energy (No Impact)

The proposed Project would not use land that was otherwise slated for renewable energy production and does not otherwise conflict with any state or local renewable energy plans. In addition, fuel use would be consistent with current construction and manufacturing practices and energy standards that promote strategic planning that reduces consumption of fossil fuels and enhances energy efficiency. Further, the proposed Project electrical and plumbing fixtures would be Title 24 and CALGreen compliant and the proposed Project would also install EV charging stations in compliance with CALGreen Tier 2, which would also be consistent with City of Dublin General Plan Energy Conservation Element strategies. Lastly, the proposed Project would be all-electric (i.e., no natural gas infrastructure), which would be consistent with the City's CAP 2030 strategy Building Efficiency and Electrification (Measure EE-1: Achieve All-Electric New Building Construction). Therefore, the proposed Project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency and there would be **no impact**.

Source(s)

California Energy Commission (CEC). 2023a. 2021 Electricity Consumption by Entity: Pacific Gas & Electric Company. Available online: http://www.ecdms.energy.ca.gov/elecbyutil.aspx. Accessed February 2023.

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City of Dublin. 2020. Climate Action Plan 2030 and Beyond. September. Available online: https://dublin.ca.gov/DocumentCenter/View/24447/Climate-Action-Plan-2030-And-Beyond. Accessed March 2023.

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Geology and Soils

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Environmental Setting

Seismic Hazards

The Project site is situated in a seismically active area within the Diablo Range, along the margin of the eastern Diablo Hills and the western edge of the Livermore Valley. The fault trace of the active Calaveras Fault is approximately 965 feet east of the Project site, and the Alquist-Priolo Earthquake Fault Zone associated with the Calaveras Fault is approximately 450 feet east of the Project site (DOC 2023). The active Pleasanton Fault is approximately 2.4 miles east of the Project site (Jennings and Bryant 2010). Other active faults in the Project region include a portion of the Las Positas Fault (approximately 11.7 miles to the southeast), the Greenville Fault (approximately 12.5 miles to the northeast), and the Hayward Fault Zone (approximately 7.3 miles to the southwest).

The Project site is located within an Earthquake Zone of Required Investigation for liquefaction as delineated by the California Geological Survey (CGS) (DOC 2023).

Soils

Based on a review of Natural Resource Conservation Service (NRCS) soil survey data, native soil at the Project site consists of the Yolo loam (calcareous substratum, 0 to 6 percent slopes) soil type (NRCS 2022).

A preliminary geotechnical investigation was prepared for the proposed Project, which included four soil borings in the developed portion of the Project site north of Dublin Creek (Cornerstone Earth Group [Cornerstone] 2022). The results of soil borings indicated that the near-surface soils consist of undocumented artificial fill consisting of clay with variable amounts of sand and gravel, and clayey sand with gravel, to depths ranging from 1.5 to 5 feet below the ground surface (bgs). Below the artificial fill, clay with sand and silt was present to the maximum soil boring depth of 40 feet bgs.

Paleontological Resources

The near-surface soils at the Project site consist of artificial fill material to depths ranging from 1.5 to 5 feet bgs (Cornerstone 2022). Native sediments at the Project site beneath the artificial fill consist of the late Miocene to early Pliocene-age Contra Costa Group, which includes the Orinda and Moraga Formations. The Contra Costa Group is comprised of nonmarine sedimentary rocks including sandstone, conglomerate, shale, and minor claystone, limestone, and tuff (Wagner et al. 1991).

A search of the University of California Museum of Paleontology (UCMP) database indicates there are over 40 recorded vertebrate fossil sites from within the Contra Costa Group (UCMP 2023). Most of these sites are in Contra Costa County; however, five of the sites are within Alameda County. The closest recorded vertebrate fossil site from within the Contra Costa Group is Bolenas Creek, approximately 6.5 miles northwest of the Project site (UCMP 2023).

Paleontological Sensitivity Analysis

A paleontologically sensitive geologic formation is one that is rated high for potential paleontological productivity (i.e., the recorded abundance and types of fossil specimens, and

the number of previously recorded fossil sites) and is known to have produced unique, scientifically important fossils. Exposures of a specific geologic formation at any given Project site are most likely to yield fossil remains representing particular species or quantities similar to those previously recorded from that geologic formation in other locations. Therefore, the paleontological sensitivity determination of a rock formation is based primarily on the types and numbers of fossils that have been previously recorded from that formation.

In its standard guidelines for assessment and mitigation of adverse impacts on paleontological resources, the Society of Vertebrate Paleontology (SVP 2010) established four categories of sensitivity for paleontological resources: high, low, no, and undetermined. Areas where fossils have been previously found are considered to have a high sensitivity and a high potential to produce fossils. Areas that are not sedimentary in origin and that have not been known to produce fossils in the past typically are considered to have low sensitivity. Areas consisting of high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites) are considered to have no sensitivity. Areas that have not had any previous paleontological resource surveys or fossil finds are considered to be of undetermined sensitivity until surveys are performed. After reconnaissance surveys, a qualified paleontologist can determine whether the area of undetermined sensitivity should be categorized as having high, low, or no sensitivity. In keeping with the SVP significance criteria, all vertebrate fossils are generally categorized as being of potentially significant scientific value.

The near-surface artificial fill consists of materials that were excavated from another location, transported to the Project site, and then graded and compacted. During the excavation and subsequent construction process, any fossils that may have been present in the original materials would have been destroyed. Therefore, the artificial fill is not paleontologically sensitive.

Because of the large number of vertebrate fossils that have been recovered from the Contra Costa Group, it is considered to be of high paleontological sensitivity.

Regulatory Framework

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (California Public Resources Code [PRC] Sections 2621–2630) was passed in 1972 to reduce the hazard of surface faulting to structures designed for human occupancy. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed structures would not be constructed across active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The

act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Standards Code

The California Building Standards Code (CBC) (Title 24 of the California Code of Regulations) provides minimum standards for building design in California. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC) used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with numerous more detailed or more stringent regulations. The State earthquake protection law (California Health and Safety Code, Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by earthquakes. The CBC requires that any structure designed for a project site undergo a seismic design evaluation that assigns the structure to one of six categories, A–F; Category F structures require the most earthquake-resistant design. The CBC philosophy focuses on "collapse prevention," meaning that structures are to be designed to prevent collapse during the maximum level of ground shaking that could reasonably be expected to occur at a site. CBC Chapter 16 specifies exactly how each seismic-design category is to be determined on a site-specific basis, based on site-specific soil characteristics and proximity to potential seismic hazards. CBC Chapter 18 regulates the analysis of expansive soils, slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, along with an evaluation of lateral pressures on basement and retaining walls, liquefaction and loss of soil strength, and lateral movement or reduction of the foundation's soil-bearing capacity.

Dublin Municipal Code Section Chapter 7.16, Grading Regulations

The City of Dublin Grading Ordinance (Municipal Code Chapter 7.16) requires a geologic/soil investigation report, preliminary grading plans, proposed provisions for storm drainage control, and any existing or proposed flood control in the vicinity of the grading. A conceptual plan for erosion and sediment control is also required, including both temporary facilities and long-term site stabilization features such as planting or seeding for the area affected by the proposed grading. Chapter 7.16 prohibits grading operations during the rainy season except upon a clear demonstration, to the satisfaction of the Director of Public Works, that at no stage of the work will there be any substantial risk of increased sediment discharge from the site. Should grading be permitted during the rainy season, the smallest practicable area of erodible land must be exposed at any one time during grading operations and the time of exposure must be minimized.

City of Dublin General Plan

Chapter 8.0 of the City of Dublin General Plan outlines policies and programs related to seismic safety, safety and emergency preparedness. The following policies related to geology and soils are applicable to the proposed project:

- **Guiding Policy 8.2.1.A.1.** Geologic hazards shall be mitigated or development shall be located away from geologic hazards in order 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

a. 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.

b. 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.

Project Impacts and Mitigation Measures

(a) Seismic hazards

i) Surface Fault Rupture

The Project site is not located within an Alquist-Priolo Earthquake Fault zone or the fault trace of any other known fault (DOC 2023, Jennings and Bryant 2010). Thus, there would be **no impact** from surface fault rupture during construction or operation.

ii) Strong Seismic Ground Shaking

As described above in the Environmental Setting, the Project site is located in a seismically active area. Seismic design calculations performed by Cornerstone (2022) estimated a peak ground acceleration of 0.73 gravity (*g*) for the Project site, which indicates that strong seismic ground shaking would be anticipated at some point during the next 50 years. The proposed Project would not exacerbate the potential for seismic shaking, as the intensity of the earthquake ground motion at the site would depend on the characteristics of the generating fault, distance to the earthquake epicenter, magnitude, and duration of the earthquake, and specific site geologic conditions. While complete avoidance of any damage may not be feasible, the Project would be designed to withstand seismic shaking. The CBC includes provisions to reduce impacts caused by major structural failures or loss of life resulting from earthquakes or other geologic hazards, and the preliminary geotechnical investigation prepared by Cornerstone includes measures to reduce the hazards from strong seismic ground shaking. Design review performed through the City's permitting process would ensure compliance with the requirements of the CBC and the City's building standards. Therefore, the impact from strong seismic ground shaking during construction and operation would be **less than significant**.

iii) Liquefaction, Lateral Spreading, and Settlement

Based on the results of soil borings, the close proximity to the active Calaveras Fault, and the fact that groundwater was encountered at the Project site at depths ranging from 18 to 20 feet bgs, Cornerstone (2022) indicated there is potential for liquefaction in localized sand layers

underneath the proposed building, which could induce settlement of 0.25 inch or less. Cornerstone (2022) also indicated that approximately 1.25 inches of settlement could occur from liquefaction-induced settlement in the area proposed for parking and landscaping south of the building. Liquefaction and settlement associated with the proposed building would be addressed through required compliance with the CBC, and the preliminary geotechnical investigation prepared by Cornerstone includes measures to reduce the hazards from liquefaction. Design review performed through the City's permitting process would ensure compliance with the requirements of the CBC and the City's building standards. Therefore, impacts related to liquefaction and associated settlement would be **less than significant**.

The preliminary geotechnical investigation (Cornerstone 2022) indicated that there is a moderate potential for lateral spreading associated with the area proposed for parking and landscaping between the building and Dublin Creek to the south, where horizontal displacement could range from several inches to a few feet. However, the potential for lateral spreading further from the creek (including within the proposed building footprint) is low; therefore, the risk of injury, loss, or death from lateral spreading in areas adjacent to the creek during a seismic event would be minimal. Therefore, the impact from hazards related to lateral spreading during construction and operation would be **less than significant**.

iv) Landslides

The Project site north of Dublin Creek has been previously graded to accommodate the existing building and parking lots and is nearly flat. The elevation slopes gently from approximately 388 feet in the west to 384 feet in the southeast and 380 feet in the northeast. The Project site itself is not located in an Earthquake Zone of Required Investigation for landslides (DOC 2023). A small landslide hazard area has been mapped by CGS approximately 350 feet northwest of the Project site, on the north side of Dublin Boulevard (DOC 2023). However, this area has since been graded and developed as a housing development, and the area indicated as a landslide hazard zone is now flat and is approximately 25 feet below the elevation of Dublin Boulevard. Therefore, this area would not represent a hazard for the project site.

Another small landslide hazard zone has been identified by CGS along a ridge approximately 800 feet south of the Project site, south of Dublin Canyon Road (DOC 2023). This area is approximately 125 feet higher than the Project site; however, given the intervening distance and small mass of this ridgeline, if a landslide were to occur it would be unlikely to affect the Project site. Therefore, the impact from landslide hazards during construction and operation would be **less than significant**.

(b) Erosion/topsoil loss (*Less than Significant*)

Based on a review of NRCS (2022) soil survey data, the Yolo loam soil in the southern portion of the Project site adjacent to Dublin Creek has a moderate water infiltration rate, is well drained, and has a moderate water erosion and runoff hazard (NRCS 2022). Surficial soils in the remainder of the Project site consist of artificial fill (Cornerstone 2022). No Project-related earthmoving activities would occur on Parcel 2, which is south of the existing parking lot, adjacent to Dublin Creek. However, if not properly controlled, construction-related stormwater runoff could drain south into Dublin Creek resulting in erosion. However, because the proposed

Project would disturb more than 1 acre of land, the Project applicant is required by law to prepare a SWPPP and implement site-specific BMPs specifically designed to prevent erosion and downstream sedimentation, and to protect water quality, in compliance with the statewide National Pollutant Discharge Elimination System (NPDES) Construction General Permit (Order WQ 2022-0057-DWQ). Furthermore, the Project applicant is required to implement the provisions of City Municipal Code Chapter 7.16, which require grading and drainage plans that identify measures to reduce erosion, and which generally prohibits grading activities during the winter rainy season. Therefore, impacts from construction-related soil erosion would be **less than significant**. The potential for operational activities to result in soil erosion is evaluated in Section 9, Hydrology and Water Quality.

(c-d) Soil stability (Less Than Significant Impact)

The potential for unstable soils associated with seismic activity is evaluated in criteria (a), above. No development is proposed in the native soils adjacent to Dublin Creek. Laboratory test results indicated that soils underneath the developed portion of the Project site are moderately expansive (Cornerstone 2022). Soil expansion associated with the proposed building would be addressed through compliance with the CBC, which is mandatory for all projects. The preliminary geotechnical investigation prepared by Cornerstone includes recommended measures to reduce the hazards from soil expansion consistent with the CBC. These measures include adding sufficient reinforcement of slab-on-grade supported on a layer of non-expansive soil; extending footings below the zone of seasonal moisture fluctuation; limiting moisture changes in the surficial soils by using positive drainage away from building as well as limiting landscape watering; implementing a plug of low-permeability clay soil, sand-cement slurry, or lean concrete within trenches just outside where trenches pass into building and pavement areas; and following detailed grading and foundation recommendations specified in the Geotechnical Report (Cornerstone 2022). Design review performed through the City's permitting process would ensure compliance with the requirements of the CBC and the City's building standards. Therefore, because the Project would be required to implement measures to comply with the CBC, the City's building standards, hazards from soil expansion would be reduced, and impacts from construction and operation related to unstable soils and soil expansion would be **less than significant**.

(e) Soil capability to support wastewater disposal, including septic (No Impact)

The Project site is located within the area served by a municipal wastewater system. Wastewater treatment would continue to be provided at the regional treatment plant (see Section 18: Utilities and Service Systems for additional details). Because the proposed Project would not require installation of a septic system or alternative wastewater disposal system, there would be **no impact** from Project construction or operation.

(f) Unique geologic feature/paleontological resources (Less Than Significant with Mitigation)

A unique geologic feature consists of a major natural element that stands out in the landscape, such as a large and scenic river, gorge, waterfall, volcanic cinder cone, lava field, or glacier. There are no unique geologic features at the Project site or within the Project viewshed. Thus, there would be **no impact** to unique geologic features from Project construction or operation.

Paleontological Resources – Construction

In areas where the artificial fill only extends to 1.5 feet, excavation and grading during project construction would encounter the native Contra Costa Group materials, which are of high paleontological sensitivity. Furthermore, excavation to a maximum depth of approximately 12 feet would occur at the proposed on-site stormwater drainage pumps, which would also encounter the paleontologically sensitive Contra Costa Group. Therefore, project-related earthmoving activities could result in accidental damage to, or destruction of unique paleontological resources, and this impact would be **potentially significant.** With implementation of **Mitigation Measure GEO-1: Avoid Impacts to Unique Paleontological Resources**, potential construction-related impacts to unique paleontological resources would be **less than significant with mitigation**. This impact is further analyzed in the Focused EIR.

Paleontological Resources – Operation

Because Project operation would not involve ground-disturbing activities, there would be **no impact** to unique paleontological resources.

Source(s)

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Greenhouse Gas Emissions

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
7.	**GREENHOUSE GAS EMISSIONS. Would the project:**				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b)	Conflict with applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Environmental Setting

Certain gases in the Earth's atmosphere, classified as GHGs, play a critical role in determining the Earth's surface temperature. A portion of the solar radiation that enters the Earth's atmosphere is absorbed by the Earth's surface, and a smaller portion of this radiation is reflected back toward space. Infrared radiation is absorbed by GHGs; therefore, infrared radiation released from Earth 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.

GHGs are present in the atmosphere naturally, are released by natural sources and anthropogenic sources, and are formed from secondary reactions taking place in the atmosphere. The following GHGs are widely accepted as the principal contributors to human-induced global climate change that would be relevant to the proposed Project: CO_2; methane (CH_4); and nitrous oxide (N_2O). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4 is the main component of natural gas and is associated with agricultural practices and landfills. N_2O is a colorless GHG that results from industrial processes, vehicle emissions, and agricultural practices.

Global warming potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to CO_2. The GWP of a GHG is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (atmospheric lifetime). The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of 1. The other main GHGs that have been attributed to human activity include CH_4, which has a GWP of 28, and N_2O, which has a GWP of 265 (IPCC 2013). For example, 1 ton of CH_4 has the same contribution to the greenhouse effect as approximately 28 tons of CO_2. GHGs with lower emissions rates than CO_2 still may contribute to climate change because they are more effective at absorbing outgoing infrared radiation than CO_2 (i.e., high GWP). The concept of CO_2-equivalents (CO_2e) is used to account for the different GWP potentials of GHG to absorb infrared radiation.

Regulatory Framework

Executive Order S-3-05. Executive Order (EO) S-3-05, signed in June 2005, proclaimed that California is vulnerable to the impacts of climate change. EO S-3-05 declared that increased temperatures could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emissions targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill 32. In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.). AB 32 further details and puts into law the mid-term GHG reduction target established in EO S-3-05, which is to reduce statewide GHG emissions to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. AB 32 also identifies CARB as the state agency responsible for the design and implementation of emissions limits, regulations, and other measures to meet the target.

Executive Order B-30-15. Issued in April 2015, EO B-30-15 establishes a statewide GHG reduction goal of 40 percent below 1990 levels by 2030. The emission reduction target acts as an interim goal between the AB 32 goal (i.e., achieve 1990 emission levels by 2020) and EO S-03-05 goal of reducing statewide emissions 80 percent below 1990 levels by 2050. In addition, the EO aligns California's 2030 GHG reduction goal with the European Union's reduction target (i.e., 40 percent below 1990 levels by 2030) that was adopted in October 2014.

Executive Order B-55-18. Issued in September 2018, EO B-55-18 establishes a new statewide goal of achieving and maintaining carbon neutrality as soon as possible and no later than 2045.

Senate Bill (SB) 32. SB 32, signed on September 8, 2016, requires California to reduce GHG emissions to 40 percent below 1990 levels by 2030. That 2030 target represents reductions needed to ensure California can achieve its longer-term 2050 target of a reduction of GHG emissions by 80 percent below 1990 levels per EO B-30-15.

Assembly Bill 1279. AB 1279, signed on September 16, 2022, declares the policy of the state both to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. The bill requires CARB to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California, as specified.

Bay Area Air Quality Management District (BAAQMD). In April 2022, BAAQMD adopted new CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans (BAAQMD 2022). The BAAQMD analyzed what will be required of new land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045 as articulated in Executive Order B-55-18 (and subsequently codified in AB 1279). The BAAQMD found that a new land use development project being built today needs to either incorporate design elements (listed below) to do its "fair share" of implementing the goal of

carbon neutrality by 2045 or be consistent with a local GHG reduction strategy that meets the criteria under the State CEQA Guidelines Section 15183.5(b).

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 off-street EV requirements in the most recently adopted version of CALGreen Tier 2.

As described in more detail below, the City of Dublin has prepared a Climate Action Plan, which serves as the City of Dublin's qualified GHG Reduction Plan and programmatic tiering document that meets the criteria under the State CEQA Guidelines Section 15183.5(b). Therefore, the proposed Project's impacts related to GHG emissions are analyzed using the City of Dublin's Climate Action Plan 2030.

City of Dublin General Plan. The City of Dublin General Plan, adopted in 1985 and amended in 2022, includes an Environmental Resources Management: Community Design & Sustainability Element. In addition to the policies listed in Section 3.7, Energy, from the Energy Conservation Element, the following policies and measures related to GHG emissions and sustainability would be applicable to the proposed Project:

- 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.

- Encourage development features that minimize the use of non-renewable energy consumption (i.e. material reuse, natural lighting and ventilation, etc.).
- Facilitate environmental and energy-efficient design guidelines that promote good design for new construction.

City of Dublin Climate Action Plan 2030. The City of Dublin adopted its Climate Action Plan 2030 and Beyond (CAP 2030) in September 2020, as a guiding document to identify ways in which the community and City can reduce GHG emissions, meet Dublin's long-term climate action goals, and promote a healthy, prosperous community. The purpose of the CAP 2030 is to meet California's 2030 GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 and set the City on the path to achieve the goal envisioned by EO B-55-18 of carbon neutrality by 2045. The CAP 2030 focuses on the following strategies: 100 percent renewable and carbon-free electricity; building efficiency and electrification; sustainable mobility and land use; materials and waste management; and municipal leadership measures (City of Dublin 2020).

The City's CAP 2030 also allows for CEQA streamlining pursuant to CEQA Guidelines Section 15183.5(b). In order to reach the City of Dublin's GHG emissions reduction goal (65,090 MT of CO_2e by 2030) the City has identified four strategies and seven core measures which are expected to reduce communitywide emissions by an estimated 73,452 MT of CO_2e in 2030. The City has determined that implementing the measures in the CAP 2030 should reduce the impacts from activities under jurisdictional control or significant influence of the City of Dublin to collectively achieve the specified emissions levels in the CAP. These strategies include:

- Strategy 1: Renewable and Carbon-Free Energy (CF)
    - CF-1: Opt-Up to 100% Renewable and Carbon-Free Electricity
    - CF-2: Develop a Renewable Resource Buildout Plan
- Strategy 2: Building Efficiency and Electrification (EE)
    - EE-1: Achieve All-Electric New Building Construction
    - EE-2: Implement the State Building Energy Disclosure Program
    - EE-3: Streamline Battery Storage Permit Requirements
    - EE-4: Develop an Existing Building Electrification Plan
- Strategy 3: Sustainable Mobility and Land Use (SM)
    - SM-1: Adopt an Electric Vehicle Charging Station Ordinance
    - SM-2: Develop an EV Infrastructure Plan
    - SM-3: Develop a Transportation Demand Management Plan
    - SM-4: Develop a Citywide Parking Management Plan
    - SM-5: Update the Bicycle and Pedestrian Master Plan
    - SM-6: Continue to Prioritize Transit-Oriented Development
    - SM-7: Develop a Built Environment That Prioritizes Active Mobility

- Strategy 4: Materials and Waste Management (MM)
    - MM-1: Achieve the Organic Waste Diversion Requirements of SB 1383
    - MM-2: Reduce Embodied Emissions Associated with Building Materials

Project Impacts and Mitigation Measures

(a) Generate GHG emissions (Less than Significant/Less than Cumulatively Considerable)

Heavy-duty off-road equipment, materials transport, and worker commutes during construction of the proposed Project would result in GHG emissions from vehicle exhaust. After construction, day-to-day activities associated with operation of the proposed Project would generate emissions from sources such as area, mobile, electricity, solid waste, water and wastewater sources.

As discussed previously, the City's CAP 2030 constitutes a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5 Pursuant to CEQA Guidelines Sections 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP 2030. Accordingly, the analysis of the proposed Project's cumulative contribution to climate change and GHG emissions is demonstrated by the analysis of the project's consistency with the applicable CAP 2030 measures, as shown in Table 3: Project Consistency with Applicable CAP 2030 GHG Emissions Reduction Measures below.

Table 3: Project Consistency with Applicable CAP 2030 GHG Emissions Reduction Measures

GHG Emission Reduction Measure	Description	Project Consistency
Strategy 1: Renewable and Carbon-Free Energy (CF)	-	-
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 automatically enrolled in East Bay Community Energy's Renewable 100 electricity service.
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 and the Renewable Resource Buildout Plan has not been developed at the time of this analysis; however, the Project would not conflict with development of renewable resources and the Project would be required to comply with any associated standards or requirements.

GHG Emission Reduction Measure	Description	Project Consistency
Strategy 2: Building Efficiency and Electrification (EE)	-	-
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. Consistent with Dublin Municipal Code (DMC) Chapter 7.94.100 (Green Building Code, All electric buildings), the proposed Project would be all-electric and would not have natural gas infrastructure.
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 proposed Project would be covered by AB 802 and would be required to report energy use through the Energy Star Portfolio Manager tool.
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 installation of additional energy storage capacity in Dublin.	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.
EE-4: Develop an Existing Building Electrification Plan	Develop a plan to promote the retrofit of 22% 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 for existing buildings. As the Project does not include existing structures, and would instead demolish an existing building, this measure does not apply.
Strategy 3: Sustainable Mobility and Land Use (SM)	-	-
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 EVs.	Consistent. Consistent with DMC Chapter 7.94.090 (Green Building Code, EV charging), the proposed Project would install EV charging at the Tier 2 level (EV-capable and EV Charging Station Equipment).
SM-2: Develop an EV 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 responsible for this measure; however, the proposed Project would implement the required number of EV chargers per DMC Chapter 7.94.090.
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 responsible for this measure; however, as described in more detail in Section 16, Transportation, the proposed Project would be located in an area with a projected vehicle miles travelled (VMT) per employee lower than 12.9 miles (which is 15 percent lower than the existing countywide 15.2 VMT per employee for the East Planning Area). In addition, the existing pedestrian, bicycle, and transit facilities serving the Project site are adequate (W-Trans 2022). The proposed Project would also provide bicycle storage spaces that exceed the City's bicycle parking requirements.

GHG Emission Reduction Measure	Description	Project Consistency
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 travelled.	Consistent. The City is responsible for this measure; however, as described in more detail in Section 16, Transportation, the proposed Project would be located in an area with a projected VMT per employee lower than 12.9 miles. In addition, the proposed parking supply meets City requirements and estimated parking demand (W-Trans 2022).
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 responsible for this measure; however, as described in more detail in Section 16, Transportation, the proposed Project would be located in an area with a projected VMT per employee lower than 12.9 miles. In addition, the existing pedestrian, bicycle, and transit facilities serving the Project site are adequate (W-Trans 2022). Further, the proposed Project would provide bicycle storage spaces that exceed the City's bicycle parking requirements.
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.	Consistent. The City is responsible for this measure; however, as described in more detail in Section 16, Transportation, the proposed Project is adequately served by transit since existing transit stops are less than one-half mile away from the Project site (W-Trans 2022).
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 City is responsible for this measure; however, pedestrian and bicycle facilities serving the Project site are adequate since existing pedestrian and bicycle access provide connectivity between the Project site and surrounding multi-modal transportation infrastructure and facilities. In addition, the proposed Project includes long-term and short-term bicycle stalls as well as an interior bike rack.
Strategy 4: Materials and Waste Management (MM)	**-**	**-**
MM-1: Achieve the Organic Waste Diversion 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 responsible for this measure; however, the proposed Project would comply with the Organics Reduction and Recycling Ordinance (City of Dublin 2023).
MM-2: Reduce Embodied 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.	Not applicable. The City has not adopted an ordinance mandating low carbon concrete for all new development projects at the time of this analysis.

Note: Municipal GHG emissions reduction measures (Strategy 5: Municipal Leadership Measures) are not included here as they would not be applicable to the proposed Project.
CF = Renewable and Carbon-Free Energy; EE = Building Efficiency and Electrification; SM = Sustainable Mobility and Land Use; MM = Materials and Waste Management; AB = Assembly Bill; SB = Senate Bill; DMC = Dublin Municipal Code

As summarized in Table 3 above, the proposed Project would be consistent with all applicable GHG emission reduction measures included in CAP 2030.

For disclosure purposes, construction and operational GHG emissions of the proposed Project were also estimated using the same methodology discussed earlier under Section 3.2, Air Quality. These emissions are shown in Table 4: GHG Emissions Summary below. As shown in Table 4, the proposed Project would result in a net reduction in GHG emissions, primarily due to the reduction in daily vehicle trips and more energy-efficient, all-electric building, compared to existing conditions.

Therefore, because the proposed Project would not conflict with the CAP 2030 measures and implementation of the proposed Project would result in a net reduction in GHG emissions compared to existing conditions, this impact would be **less than significant impact and less than cumulatively considerable based on consistency with CAP approach.**

Table 4: GHG Emissions Summary

Source/Description	GHG Emissions
Construction	**-**
Total Construction Emissions (MT CO_2e)	439
Amortized Construction Emissions (MT CO_2e/year) [1]	15
Operation	**-**
Area (MT CO_2e/year)	<0.1
Energy (MT CO_2e/year) [2]	113
Mobile (MT CO_2e/year)	454
Stationary (MT CO_2e/year)	3
Waste (MT CO_2e/year)	65
Water (MT CO_2e/year)	53
Total Annual Emissions, including amortized construction (MT CO_2e/year) [3]	703
Existing Emissions (MT CO_2e/year)	790
Net Emissions (MT CO_2e/year)	(87)

Notes: GHG = greenhouse gas; MT CO_2e/year = metric tons carbon dioxide equivalent per year
Additional modeling assumptions and details are provided in Appendix D.

[1] Since construction related GHG emissions would cease upon completion of construction, GHG emissions associated with construction of the proposed Project were amortized over the proposed Project lifetime. The assumed amortization period is 30 years, based on the typically assumed project lifetime based on other air districts (e.g., South Coast Air Quality Management District [2008]).

[2] Energy-related emissions associated with the proposed Project conservatively assume PG&E is the service provider. However, as of January 2022, the default electricity option is East Bay Community Energy's (EBCE's) Renewable 100 service, which is sourced from California wind and solar facilities, which would further reduce indirect GHG emissions as a result of energy consumption.

[3] The operational GHG emission estimates assumed the proposed Project would include 18,000 square feet of office space, 36,500 square feet of light industrial space, and 70,804 square feet of warehousing space. Based on the latest site plan, it is anticipated the proposed Project would include 18,000 square feet of office space, 30,000 square feet of light industrial space, and 77,304 square feet of warehousing space. Since light industrial land uses generate higher daily vehicle trips than warehousing land uses, daily vehicle trips and the associated GHG emissions are anticipated to be lower (i.e., the GHG emission estimates assumed the proposed Project would generate 494 daily trips, based on the 2022 Transportation Impact Study (W-Trans 2022); however, based on the updated site plan the proposed Project is anticipated to generate approximately 468 daily trips). Similarly, based on California Emissions Estimator Model (CalEEMod) default data, building energy consumption rates for light industrial land uses are higher than building energy consumption rates for warehousing space. As such, the GHG emissions presented above are conservative since fuel consumption and electricity consumption would be lower. Therefore, implementation of the proposed Project would result in a higher net reduction in GHG emissions compared to existing conditions.

(b) Conflict with GHG plans or regulations (Less Than Significant Impact)

As discussed previously, the City of Dublin adopted CAP 2030, which establishes a pathway for the City to achieve emissions reductions in alignment with the 2030 GHG reduction goals established by SB 32 and help prepare the City of Dublin to implement further programs and policies to meet carbon neutrality by 2045. As summarized in Impact (a) above, the proposed Project would be consistent with the applicable measures of CAP 2030.

In accordance with State law, CARB developed the State's Climate Change Scoping Plan (2008) and Scoping Plan updates (2014, 2017, and 2022) to outline the State's strategy to reduce California's GHG emissions per AB 32, SB 32, and AB 1279. In addition, as required by Dublin Municipal Green Building Code, the proposed Project would also comply with the most current Building Energy Efficiency Standards and CALGreen mandatory measures. The Building Standards and CALGreen requirements include mandatory measures for all new building construction, which would result in energy conservation and contribute to meeting the State's goals established by AB 32 and SB 32 for reduction in GHG emissions. Furthermore, the proposed Project would be all-electric (no natural gas infrastructure), consistent with the CARB 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) goals of building decarbonization and ending fossil fuel infrastructure expansion for newly constructed buildings.

Additionally, as described in Impact (a) above, implementation of the proposed Project would result in a net reduction in GHG emissions compared to existing conditions, and as a result, would not conflict with the goals and strategies included in local and statewide plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

Furthermore, the proposed Project would also be consistent with the BAAQMD recommended building project design features of not including natural gas infrastructure or resulting in any wasteful, inefficient, or unnecessary energy usage (as discussed in Section 3.7, Energy), as well as the transportation project design features of achieving a reduction in project-generated VMT below the regional average (as discussed in Section 16, Transportation), and compliance with off-street EV requirement per CALGreen Tier 2 (pursuant to DMC Chapter 7.94.090). The BAAQMD project design features were developed based on an analysis of what would be required of land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045 as articulated in Executive Order B-55-18. Although these project design features are not being used to evaluate the proposed Project's climate impact under CEQA because the City has developed a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b), these design features can be used as indicators of the proposed Project's consistency with California's long-term climate goal of carbon neutrality by 2045 (as codified in AB 1279) and CARB's 2022 Scoping Plan. Therefore, the proposed Project would not conflict with the applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions, and this impact would be **less than significant**.

Source(s)

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South Coast Air Quality Management District. 2008. Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold. Available online: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2. Accessed February 2023.

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Hazards and Hazardous Materials

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly, 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?			X	

Environmental Setting

The Project site has been used since the 1960s as a research and development facility, which tests epoxy resins and composites primarily for aerospace and other applications. The laboratories were used for small-scale testing, while the building located south of the offices/laboratories (referred to by Hexcel as the "Hi Bay") was used to test larger quantities of

carbon fiber plates. Part of the research activities include testing prefabricated prototype carbon fiber plates. The research activities include chemical testing and reactions of the carbon fiber plates, as well as climate or extreme condition testing of the plates including extreme heat, cold, pressure, and electrical conditions, and stress testing. A Phase I Environmental Site Assessment (ESA) was performed by Ardent Environmental Group (Ardent) in 2022. The main chemicals used at the site include petroleum oils and lubricants, non-chlorinated solvents, metals (such as chromium and aluminum), and acids. According to waste records and a 1994 chemical inventory, historical chemical uses included halogenated solvents, including 1,1,1-trichloroethane (1,1,1-TCA) and trichloroethene (TCE). Small containers of the different testing chemicals were stored in approximately 10 fire cabinets in a designated Hazardous Waste and Storage Area, while larger quantities of virgin chemicals and wastes were stored in 55-gallon drums in the Hazardous Waste and Storage Area. The following areas of concern were noted in the Phase I ESA (Ardent 2022).

- **Area of Chemical Use, Storage, and/or Handling.** Chemicals are used, stored, and/or handled in the laboratories (existing and historical), Hi Bay area, and within the hazardous waste and storage area of the site.
- **Former 500-Gallon Waste Chromic Acid Underground Storage Tank (UST, Abandoned In-Place in 1988).** This Underground Storage Tank (UST) was located immediately east of the Hi Bay portion of the building and was used to containerize waste acid wash reportedly consisting of deionized water, sulfuric acid, and sodium dichromate generated from the etching of aluminum panels. Soil and groundwater in the vicinity of this UST were investigated in the late 1980s under the direction and oversight of the Alameda County Department of Environmental Health (ACDEH). Laboratory results indicated no detectable to low concentrations of hexavalent chromium, trivalent chromium, and aluminum. Based on these results, ACDEH allowed Hexcel to abandon the UST in-place by filling the tank with a cement slurry.
- **Recently Removed 520-Gallon Waste Chromic Acid UST (2021).** This UST was formerly located immediately east of the on-site hazardous waste and storage area and accepted waste from accidental spills from this area. Floor drains in the hazardous waste and storage area directed any accidental spills of chemicals to the tank. The UST was removed in April 2021 under the direction and oversight of the ACDEH. Following removal, two soil samples were collected from within the UST excavation. Laboratory results indicated no detectable concentrations of total petroleum hydrocarbons, and no detectable to low concentrations of volatile organic compounds (VOCs), namely acetone, at levels that were well below federal and state thresholds. Based on these results, the ACDEH issued a No Further Action letter dated July 20, 2021.
- The eastern portion of the existing building was constructed in 1962, with subsequent additions over the years. Based on the age of the building, Ardent (2022) concluded that asbestos-containing materials (ACMs) and lead-based paint are likely present.

As part of the Phase I ESA, Ardent (2022) retained Environmental Database Report (EDR) to perform a search of federal, State, and tribal hazardous materials databases, and retained Antea Group to perform a review of identified hazardous materials sites near the Project site.

The database searches included those sites that are identified as part of the Cortese List. The Project is listed in the SWRCB's GeoTracker database as a Cleanup Program Site; however, cleanup program sites are not considered part of the Cortese List. No hazardous materials sites were determined to represent a hazard for the proposed Project (Ardent 2022).

Regulatory Framework

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) has the primary responsibility for developing and enforcing workplace safety regulations within California. The California Occupational Safety and Health Administration enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites. Cal/OSHA regulations also include requirements for protective clothing, training, and limits on exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead (CCR Title 8 Section 1532.1) and asbestos (CCR Title 8 Section 1529) investigation and abatement.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) implements the State's hazardous waste management program for the California Environmental Protection Agency. DTSC has the primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with DTSC, for the management of hazardous materials (including remediation) and the generation, transport, and disposal of hazardous waste under the authority of California's Hazardous Waste Control Law (California Health and Safety Code Section 25100, et seq.).

San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay RWQCB is authorized by the State Water Resources Control Board to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the San Francisco Bay RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened and to require remediation of the site, if necessary.

Hazardous Waste Transportation

Statutory requirements governing hazardous waste transportation in California are contained in the California Health and Safety Code, Division 20, Chapter 6.5, Articles 6.5, 6.6, and 13. Hazardous waste transporters must have a valid registration permit issued by DTSC. In addition, hazardous waste transporters must comply with a variety of other State and federal regulations, including the California Vehicle Code (CCR Title 13); California State Fire Marshal Regulations (CCR Title 19); U.S. Department of Transportation regulations (Title 49 Code of Federal Regulations); and USEPA regulations (Title 40 Code of Federal Regulations).

Bay Area Air Quality Management District

BAAQMD Regulation 11, Rule 2, adopted December 15, 1976, regulates hazardous pollutants from asbestos demolition, renovation, and manufacturing activities. The purpose of the rule is to control emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establish appropriate waste disposal procedures. The rule sets out specific procedures to be followed and methods for reducing hazards from asbestos-containing materials during such activities.

Senate Bill 1082 – California Environmental Protection Agency's Unified Program

In 1993, Senate Bill 1082 gave the California Environmental Protection Agency (CalEPA) the authority and responsibility to establish a unified hazardous waste and hazardous materials management and regulatory program, commonly referred to as the Unified Program. The Unified Program is overseen by CalEPA with support from DTSC, RWQCBs, the Office of Emergency Services (OES), and the State Fire Marshal. The purpose of this program is to consolidate and coordinate hazardous materials and hazardous waste programs, and to ensure that they are consistently implemented throughout the state. The Unified Program includes: Hazardous Materials Release Response Plans and Inventories (Business Plans), California Accidental Release Prevention Program, Underground Storage Tank Program, Aboveground Petroleum Storage Act Program, Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs, and California Uniform Fire Code Hazardous Material Management Plans and Hazardous Material Inventory Statements.

State law requires county and local agencies to implement the Unified Program. The agency in charge of implementing the program is called the Certified Unified Program Agency (CUPA). The Alameda County Department of Environmental Health is the designated CUPA for the county. In addition to the CUPA, other local agencies, such as the City of Dublin, help to implement the Unified Program.

City of Dublin General Plan

Section 8.3.4 of the General Plan outlines policies and programs related to hazards and hazardous materials. The following policies related to hazardous materials are applicable to the proposed Project:

- **Guiding Policy 8.3.4.1.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 8.3.4.1.A.2.** Minimize the risk of exposure to hazardous materials from contaminated sites.
- **Implementing Policy 8.3.4.1.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.

Project Impacts and Mitigation Measures

(a) Exposure to hazardous materials (Less than Significant Impact)

Exposure from use or spill of chemicals and other hazardous materials during construction and operation:

Construction of the project would involve the transport, use, and disposal of limited quantities of hazardous materials typically used in construction including fuels, paints, solvents, adhesives, asphalt and lubricants that could pose a threat to human health or the environment if not properly managed. The use of these hazardous chemicals and substances would be subject to federal, state, and local health and safety requirements. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol (CHP) and the Caltrans, and use of these materials is regulated by DTSC, as outlined in CCR Title 22. The Project applicant and its construction contractors would be required to use, store, and transport hazardous materials in compliance with applicable federal and State regulations during Project construction. Furthermore, as discussed in Section 9: Hydrology and Water Quality, a SWPPP would be required for the project. The SWPPP would contain Spill Response Plan to address minor spills of hazardous materials. With adherence to these regulations, impacts would be **less than significant** during construction.

Operation of the protect may involve the transport, use, and disposal of limited quantities of hazardous materials associated with the R&D and life sciences industry. If any hazardous materials are stored or handled at the Project site, either as a result of on-site businesses (similar to Hexcel) or from basic maintenance activities such as herbicides and cleaning products, the building tenants and maintenance staff would be required to follow manufacturer's instructions and (if applicable) would be required to prepare Hazardous Materials Release Response Plans and Inventories (Business Plans) and comply with the requirements of Hazardous Waste Generator (tiered permitting) Programs. Therefore, impacts from exposure to hazardous materials during Project operation would be **less than significant** during Project operation.

Exposure from disturbance of hazardous building materials at the site during construction:

Due to the age of the on-site structures at the Project site, abatement of hazardous materials including ACMs and lead-based paint may be necessary as part of the demolition activities. Construction worker health and safety regulations and hazardous materials removal and disposal protocols would be implemented in accordance with applicable federal and state standards, including the California Division of Occupational Safety and Health and the BAAQMD Regulation 11 Rule 2: Asbestos Demolition, Renovation and Manufacturing. The Naturally Occurring Asbestos (NOA) program requires "best available" dust mitigation measures to be followed during earth-moving activities to reduce exposure to airborne asbestos. An Asbestos Dust Mitigation Plan must be submitted to BAAQMD for review and approval prior to the start of earth-moving activities in areas where NOA may be encountered. The abatement contractor would be appropriately licensed and certified, and is required by law to comply with all local, state, and federal requirements regarding hazardous materials. Hazardous materials would be disposed of in an approved, off-site Class I or Class II landfill.

A permitted liquid nitrogen above ground storage tank is present in the southern portion of the site and immediately outside the existing building. However, there are no known issues with the tank and Ardent (2022) determined that the liquid nitrogen tank does not represent an environmental hazard. During demolition, the tank would be removed and disposed of in accordance with applicable federal, state, and local ACDEH standards. Since local, state and federal regulations will be complied with during the disturbance of hazardous building materials, these impacts will be **less than significant**.

(b) Upset/Accident (Less Than Significant with Mitigation Incorporated)

If soil or groundwater have previously been contaminated at levels that exceed regulatory thresholds, this would represent a significant human health and environmental hazard since excavation work would be required during construction that could release these hazardous materials. Furthermore, during demolition of the existing building, there could be exposure to lead paint and/or asbestos. Therefore, these construction-related impacts are considered **potentially significant**. With **Mitigation Measure HAZMAT-1: Perform a Phase II Environmental Site Assessment** and **HAZMAT-2: Perform Sampling of Materials To Be Demolished**, potential construction-related impacts from accidental exposure to hazardous materials would be **less than significant with mitigation**. Operation of the Project would be similar to existing conditions and is not expected to result in an upset or accident release of hazardous materials, as labeling instructions of chemicals would be followed. This impact is further analyzed in the Focused EIR.

(c) Hazardous materials near schools (*No Impact*)

There are no K-12 schools within 0.5 mile of the Project site. The nearest school, Valley Christian Elementary, is approximately 0.68 mile to the northwest. Thus, Project construction and operation would result in **no impact** from handling of hazardous materials near a school.

(d) Hazardous materials list (*No Impact*)

The nearest open, active Cortese Listed site is approximately 3 miles northeast of the Project site. The Project site is included in the State Water Resources Control Board's (SWRCB 2023) GeoTracker database as a closed Clean-Up Program Site, which is not part of the Cortese List. Because the Project site is not listed on the Cortese list, there would be **no impact**.

(e) Proximity to a public airport (*No Impact*)

The Livermore Municipal Airport is approximately 6 miles east of the Project site and outside of the airport's Airport Influence Area (Alameda County 2012). Therefore, the proposed Project would not result in an airport safety or airport noise impact. Thus, Project construction and operation would result in **no impact** from airport safety or noise hazards.

(f) Impair implementation of an emergency response plan or emergency evacuation plan (*No Impact*)

The existing ingress and egress from Dublin Boulevard to the Project site would be maintained. All construction materials would be staged on-site, and therefore no temporary lane closures along Dublin Boulevard would be required during Project construction that could impede

emergency access or hinder emergency evacuation. For Project operation, planned emergency access throughout the Project site would be reviewed by the City of Dublin Building Department and the Fire Department to ensure that appropriate widths and turning radii area provided for emergency vehicles. Furthermore, it is expected that a similar number of employees would be working at the Project site as compared to existing conditions, and therefore Project operation would not place substantial numbers of additional vehicles on area roadways that could impede emergency access or hinder emergency evacuation. Thus, Project construction and operation would result in **no impact** from impairment of emergency response or evacuation plans.

(g) Expose people or structures to wildland fires (Less Than Significant Impact)

As discussed in Section 18, Wildfire, the Project would not substantially alter site slopes or vegetation or introduce new land uses that would exacerbate potential wildfire risks at the site. Strict adherence to applicable California Public Resources Code requirements would ensure that wildfire risks are minimized during construction. The proposed building would be constructed according to CBC, the California Fire Code and City of Dublin codes, and ordinances and regulations to minimize fire hazards, including fire prevention and suppression measures; fire hydrants and sprinkler systems; emergency access; and other similar requirements. Therefore, impacts would be **less than significant**.

Source(s)

Alameda County. 2012. Livermore Executive Airport. Airport Land Use Compatibility Plan.

Ardent Environmental Group, Inc. 2022. Phase I Environmental Site Assessment, Hexcel Corporation Facility, 11711 Dublin Boulevard, Dublin, California. Ardent Project No. 101327001.

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Hydrology and Water Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
9. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	
(i). Result in substantial erosion on- or off-site;			X	
(ii). Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
(iii). Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
(iv). Impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Environmental Setting

Dublin Creek traverses the southern portion of the project site, south of the existing building and the southernmost parking area. Dublin Creek flows eastward from the foothills of the Diablo Range. It is a tributary to Alamo Creek (now known as the Alamo Canal), which flows southward along I-680. The Alamo Canal discharges at its southern end into Arroyo de la Laguna Creek, which flows southward and discharges into Alameda Creek in the Sunol Valley.

As required by the Porter-Cologne Water Quality Control Act, the San Francisco Bay RWQCB has designated beneficial uses for water body segments in its jurisdiction (including Dublin Creek, Alamo Canal, Arroyo de la Laguna Creek, and Alameda Creek) along with water quality criteria necessary to protect these uses, as contained in the *Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin* (San Francisco Bay RWQCB 2019).

Section 303(d) of the federal Clean Water Act (CWA) requires states to identify waters where the permit standards, any other enforceable limits, or adopted water quality standards are still unattained. NPDES permits for water discharges must take into account the pollutants for which a water body is listed as impaired. Even if a stream is not included in the SWRCB's 303(d) list, any upstream tributary to a 303(d)-listed stream, including Dublin Creek and Alamo Canal, could contribute pollutants to the listed segment. Arroyo del la Laguna Creek and Alameda Creek are both listed as impaired due to the presence of diazinon (SWRCB 2021).

The Project site includes an existing underground stormwater drainage system. Stormwater is discharged into Dublin Creek through two existing on-site drainage outfalls (via 10-inch and 12-inch pipelines, respectively), and via discharge into a 24-inch pipeline that also carries upstream stormwater from other off-site properties to the west and discharges into Dublin Creek in the southern portion of the Project site. These are private drainages that were maintained by the property owner. Furthermore, stormwater from the southern part of the project site drains directly into Dublin Creek via overland flow. However, because the project site was developed with the existing building and parking areas in 1962, it does not include any stormwater quality pre-treatment prior to discharge.

The Project site does not include any groundwater wells, and the proposed project does not include drilling of any new wells. Therefore, groundwater resources are not addressed further in this IS.

The channel of Dublin Creek, which flows through the southern portion of the Project site, is a 100-year floodplain as designated by the Federal Emergency Management Agency (FEMA 2009). In addition, the southeastern portion of the Project site between the existing building and Dublin Creek is within a FEMA-designated 500-year floodplain (FEMA 2009).

Regulatory Framework

Federal Clean Water Act

Water Quality Criteria and Standards, Section 303

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 303(d) requires states to develop lists of the water bodies and associated pollutants that exceed water quality criteria.

National Pollutant Discharge Elimination System Permit Program, Section 402

The NPDES permit program was established as part of the CWA to regulate municipal and industrial discharges to surface waters of the U.S. NPDES permits generally identify limits on the

concentrations and/or mass emissions of pollutants in effluent discharged into receiving waters; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. NPDES permits are required for both construction and operational stormwater discharges. California's RWQCBs are responsible for implementing the NPDES permit system.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969 is California's statutory authority for the protection of water quality. Under the Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs.

Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan)

The *Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin* (San Francisco Bay RWQCB 2019) identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the San Francisco Bay hydrologic regions.

California National Pollutant Discharge Elimination System Permit System

Waste Discharge Requirements for Construction

The California State Water Resources Control Board's (SWRCB) statewide stormwater general permit for construction activity (Order WQ 2022-0057-DWQ) is applicable to all construction activities that would disturb 1 acre of land or more. Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters through preparation of a SWPPP and implementation of BMPs along with inspection, monitoring, and reporting requirements to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources.

Municipal Regional Stormwater Discharge (MS4) Permit

The City of Dublin, along with 75 other municipalities and agencies, is a co-permittee under the Municipal Regional Stormwater Discharge (MS4) Permit administered by the San Francisco Bay RWQCB (Order No. R2-2022-0018, NPDES Permit No. CAS612008, issued May 11, 2022). The City is also a participant in the Alameda Countywide Clean Water Program, which was created to implement the requirements of the MS4 Permit. New and redevelopment projects are required to use the *C.3 Stormwater Technical Guidance* (Alameda Clean Water Program 2021) when designing stormwater drainage systems.

Dublin Municipal Code Chapter 7.74, Stormwater Management and Discharge Control

The City of Dublin's Stormwater Management and Discharge Control Ordinance (Municipal Code Chapter 7.74) was enacted to protect water quality by requiring projects to eliminate non-stormwater discharges to the municipal separate storm sewer; control the discharge to

municipal separate storm sewers from spills, dumping or disposal of materials other than stormwater; and reduce pollutants in stormwater discharges to the maximum extent practicable. Owners of properties that include a watercourse must maintain structures so as not to become a hazard to the use, function or physical integrity of the watercourse; shall not remove healthy bank vegetation beyond that actually necessary for said maintenance; and shall not remove said vegetation in such a manner as to increase the vulnerability of the watercourse to erosion (Section 7.74.110[A]). Development is prohibited within 30 feet of the centerline of any creek or 20 feet of the top of a bank (Section 7.74.110[B]).

Dublin Municipal Code Section Chapter 7.16, Grading Regulations

The City of Dublin's Grading Ordinance (Municipal Code Chapter 7.16) requires a geologic/soil investigation report, preliminary grading plans, proposed provisions for storm drainage control and any existing or proposed flood control in the vicinity of the grading. A conceptual plan for erosion and sediment control is also required, including both temporary facilities and long-term site stabilization features such as planting or seeding for the area affected by the proposed grading. Chapter 7.16 prohibits grading operations during the rainy season except upon a clear demonstration, to the satisfaction of the Director of Public Works, that at no stage of the work will there be any substantial risk of increased sediment discharge from the site. Should grading be permitted during the rainy season, the smallest practicable area of erodible land shall be exposed at any one time during grading operations and the time of exposure shall be minimized.

City of Dublin General Plan

Sections 7.2, 7.3 and 12.3 of the General Plan outlines policies and programs related to stream corridors and riparian areas and erosion and siltation control. The following policies related to hydrology and water quality are applicable to the proposed 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.
- **Implementing Policy 7.2.1.B.1.** Enforce Watercourse Ordinance 52-87 for developed areas of the city.
- **Implementing Policy 7.2.1.B.2.** Require open stream corridors of adequate width to protect all riparian vegetation, improve access, and prevent flooding caused by blockage of streams.
- **Implementing Policy 7.2.1.B.3.** Require revegetation of creek banks with species characteristic of local riparian vegetation, where construction requires creekbank alteration.
- **Guiding Policy 7.3.1.A.1.** Maintain natural hydrologic systems.
- **Guiding Policy 7.3.1.A.2.** Regulate grading and development on steep slopes.
- **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.
- **Implementing Policy 7.3.1.B.3.** Restrict development on slopes over 30 percent.
- **Implementing Policy 7.3.2.B3.** Development projects shall comply with 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 Dublin Municipal Code Chapter 7 (Public Works) and Chapter 9 (Subdivisions).
- **Guiding Policy 12.3.5.A1**. Protect the quality and quantity of surface water and groundwater resources that serve the community.
- **Guiding Policy 12.3.5.A2.** Protect water quality by minimizing stormwater runoff and providing adequate stormwater facilities.
- **Guiding Policy 12.3.5.A3.** To minimize flooding in existing and future development, design stormwater facilities to handle design-year flows based on buildout of the General Plan.

Project Impacts and Mitigation Measures

(a) Violate water quality or waste discharge requirements or degrade surface or groundwater quality (*Less than Significant Impact*)

The proposed Project would require construction on approximately 7.3 acres of the 8.81-acre Project site, which would be entirely on Parcel 1. No construction would occur on the southern approximately 0.56 acre of the Project site (Parcel 2), which is adjacent to Dublin Creek. Parcel 1, between the existing parking lot and Dublin Creek, and Parcel 2 would not include any project-related staging, construction, or earthmoving activities. Because groundwater is 18–20 feet bgs (Cornerstone Earth Group 2022), the need for construction dewatering is unlikely. Project construction would require demolition of existing buildings and pavement, excavation, grading, material stockpiling, and staging at the Project site, which would temporarily disturb surface soils. These activities would expose soil to the erosive forces of wind and water. During winter rain events, the soil could be transported via overland flow to Dublin Creek and other downstream waterbodies, thereby increasing turbidity and degrading water quality.

The Project is required by law to comply with the provisions of the SWRCB's statewide NPDES Construction General Permit (Order WQ 2022-0057-DWQ). The Construction General Permit regulates stormwater discharges for construction activities under the federal Clean Water Act and applies to all land-disturbing construction activities that would disturb 1 acre or more. The Project applicant must submit a notice of intent to discharge to the San Francisco Bay RWQCB, and must prepare and implement a SWPPP that includes BMPs to minimize those discharges. All NPDES permits also have inspection, monitoring, and reporting requirements. The San Francisco Bay RWQCB requires dischargers to implement construction and operational design features and BMPs that are specifically intended to reduce the potential for downstream hydromodification, and to control erosion and reduce downstream sediment transport, in order to protect water quality and in-stream beneficial uses as designed under the Basin Plan.

Under the NPDES MS4 Phase II General Permit for operational stormwater discharge, project applicants must comply with the Alameda Clean Water Program to protect the water quality of existing waterbodies and improve operational stormwater quality discharges. The Alameda Clean Water Program requires that measures for long-term BMPs that protect water quality and control runoff flow be incorporated into new development and substantial redevelopment projects. The proposed Project is required to design and implement operational water quality and runoff controls per the Alameda Clean Water Program's *C.3 Stormwater Technical Guidance* (Alameda Clean Water Program 2021).

The project applicant is required by law to comply with the NPDES construction and operational permit programs. In addition, the project applicant must comply with the provisions of Dublin Municipal Code Chapter 7.74, "Stormwater Management and Discharge Control," and Chapter 7.16, "Grading Regulations." Municipal Code Chapter 7.16 requires project applicants to submit a preliminary grading plan showing proposed stormwater drainage features along with features designed to control operation-related erosion and protect water quality. Final grading and drainage plans must be prepared by the project applicant and submitted to the City Building Department for review and approval prior to issuance of building permits or approval of improvement plans. Furthermore, grading during the winter rainy season is not allowed unless a waiver is obtained from the building department. Therefore, Project-related construction and operational impacts from violation of water quality standards or waste discharge requirements or other substantial degradation of surface or groundwater quality would be **less than significant**.

(b) Substantially decrease or interfere with groundwater supplies (*Less Than Significant Impact*)

There are no groundwater wells at the Project site, and none are proposed as part of the Project. Water needs for the proposed Project would continue to be met by the Dublin San Ramon Services District (DSRSD), as they are now. As discussed in Section 18, Utilities and Services Systems, the Project is estimated to necessitate double the amount of water currently being used at the Project site. However, this increased water demand from the Project would make up less than 0.0002 percent of the estimated projected supply of DSRSD. Thus, this increase would be nominal. The proposed new building and parking would result in a higher amount of impervious surfaces at the Project site as compared to existing conditions, but bioretention areas have been sized accordingly, and therefore would not result in a substantial decrease in the surface area of permeable soils that would allow rainwater to reach the aquifer. Therefore, Project construction and operation would not substantially decrease or interfere with groundwater supplies, and there would be **less than significant impact.**

(c) Substantially alter existing drainage patterns re: erosion/siltation, re: flooding, or degrade water quality (*Less Than Significant Impact*)

(i). The Project is required by law to comply with the provisions of the SWRCB's statewide NPDES Construction General Permit (Order WQ 2022-0057-DWQ). The Construction General Permit regulates stormwater discharges for construction activities under the federal CWA and applies to all land-disturbing construction activities that would disturb 1 acre or more. The

project applicant must submit a notice of intent to discharge to the San Francisco Bay RWQCB, and must prepare and implement a SWPPP that includes BMPs to minimize those discharges. All NPDES permits also have inspection, monitoring, and reporting requirements. The San Francisco Bay RWQCB requires dischargers to implement construction and operational design features and BMPs that are specifically intended to reduce the potential for downstream hydromodification, and to control erosion and reduce downstream sediment transport, in order to protect water quality and in-stream beneficial uses as designed under the Basin Plan. Furthermore, per the City of Dublin Municipal Code Chapter 7.16, grading during the winter rainy season is not allowed unless a waiver is obtained from the building department. Therefore, impacts from construction-related alteration of drainages resulting in increased erosion, degradation of water quality, or downstream flooding would be **less than significant.**

(ii) and (iii). As noted above, the Project site includes an existing stormwater drainage system that discharges to Dublin Creek through three outfalls (10-, 12-, and 24-inch, respectively) along with overland flow. The existing 10-inch outfall would no longer be used, but the existing 12-inch outfall, and the existing 12-inch conveyance line to the 24-inch outfall, would continue to be used for discharge of stormwater as part of the proposed Project. A Preliminary Drainage Plan (Kier+Wright 2022) for the proposed Project has been prepared. To comply with regional and local operational stormwater permitting requirements, the Project applicant would install a new drainage system that includes bioretention planters to provide stormwater pre-treatment prior to discharge (Kier+Wright 2022). Two pumps, with a maximum depth of excavation of between 12 to 20 feet below existing ground level, would be installed to raise stormwater to an appropriate elevation for discharge conveyance. The Preliminary Drainage Plan for the proposed Project (Kier+Wright 2022) shows the locations and components of the proposed new stormwater drainage system including the bioretention/filtration planters, which would be installed within each of five subsheds at the Project site and would generally range in size from approximately 1 to 2.7 acres. The Preliminary Drainage Plan meets the requirements of Dublin Municipal Code Section 7.16, and incorporates the design and engineering requirements of the Alameda Clean Water Program's *C.3 Stormwater Technical Guidance* (Alameda Clean Water Program 2021). In addition to water quality pre-treatment features, the Preliminary Drainage Plan incorporates the necessary storm drainage detention to attenuate excessive flow rates and volumes based on recurring storm intervals per the *C.3 Stormwater Technical Guidance* and City requirements. Therefore, the proposed on-site stormwater drainage system would be sufficient to detain and treat operational stormwater runoff generated by the proposed Project, and would not result in upstream or downstream flooding. Furthermore, the proposed Project would also meet the requirements of Dublin Municipal Code Chapter 7.74 related to stormwater management and discharge because vegetation along Dublin Creek would not be disturbed, and no development would occur within 30 feet of the centerline of Dublin Creek or within 20 feet of the top of the creek bank. Final grading and drainage plans must be prepared by the Project applicant and submitted to the City Building Department for review and approval prior to issuance of building permits or approval of improvement plans. Therefore, operational impacts from substantial alteration of drainages resulting in operational erosion and degradation of water quality, or exceedance of drainage systems and associated downstream flooding would be **less than significant**.

(iv). The channel of Dublin Creek, which flows through the southern portion of the Project site, is a FEMA 100-year floodplain. However, Project-related construction would not be performed in, and no new development would be located in, the 100-year floodplain. Project-related development in the 500-year floodplain (which consists primarily of parking, drive isles, and landscaping) does not require permitting from the City's Floodplain Administrator and does not require flood insurance, because of the very low likelihood that flooding would occur or that it would result in damage. Therefore, Project construction and operation would result in a **less than significant impact** from impedance of flood flows.

(d) Flood hazard, seiche, or tsunami (*No Impact*)

There are no large waterbodies in the Project vicinity that would represent a seiche hazard for the Project site. Furthermore, given the distance of the Project site from the Pacific Ocean (approximately 13 miles) and the presence of the intervening mountains of the Diablo Range, tsunamis would not represent a hazard for the proposed Project. Project-related construction materials would be stored in upland areas of the Project site, not within the bed or bank of the Dublin Creek channel (100-year flood zone). Therefore, the proposed Project would result in **no impact** from inundation of construction materials in a flood hazard, seiche, or tsunami zone.

(e) Water Quality (*Less Than Significant Impact*)

For the same reasons described in criteria (a) and (c) above, construction and operation of the proposed Project would have a **less than significant impact** related to potential conflicts with or obstruction of the *Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin* (San Francisco Bay RWQCB 2019).

For the same reasons described in criterion (b) above, construction and operation of the proposed Project would have a **less than significant impact** from a substantial decrease or interference with groundwater supplies.

Source(s)

Alameda Clean Water Program. 2021. *C.3 Stormwater Technical Guidance*. Version 7.1. http://cleanwaterprogram.org/. Accessed January 26, 2023.

Cornerstone Earth Group. 2022. Geotechnical Investigation. Location 11711 Dublin Boulevard, Dublin, California.

Federal Emergency Management Agency. 2009. FEMA Flood Map Service Center, Flood Insurance Rate Maps. Available: https://msc.fema.gov/portal/home. Accessed January 26, 2023.

Kier+Wright. 2022. *Preliminary Grading and Drainage Plan, Preliminary Utility Plan*. Kier+Wright Job No. A22024. Livermore, CA.

San Francisco Bay Regional Water Quality Control Board. 2019. *Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin*. Available:

https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html. Accessed January 24, 2023.

State Water Resources Control Board. 2021. *2018 California Integrated Report*. Available online: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html. Accessed January 24, 2023.

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Land Use and Planning

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
10.	**LAND USE AND PLANNING. Would the project:**				
a)	Physically divide an established community?				X
b)	Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Environmental Setting

The Project site is located at 11711 Dublin Boulevard in the City of Dublin, Alameda County, California. The site includes two parcels totaling 8.81 acres; APN 941-1560-009-01 [Parcel 1] is the larger parcel at 8.30 acres and is located adjacent to Dublin Boulevard, and [APN] 941-1560-003-04 [Parcel 2] is the smaller parcel at 0.51 acre and is located toward the back (south) of the Project site adjacent to I-580 (Figure 1. Project Location).

Parcel 1 (the northern and main portion of the site) is developed with a 62,715 square foot building, at-grade parking, underground and aboveground utilities, pavement, and ornamental landscaping. The existing building is being used as a R&D facility. The landscape consists of grass areas and mature trees. Parcel 2 (the southern parcel) is undeveloped and is surrounded by dense riparian vegetation including mature trees. The Dublin Creek runs along the approximate southern boundary.

The Project site is immediately surrounded by commercial office uses including a R&D facility, medical and professional offices to the west, US Bank, Dublin Pioneer Cemetery, and the Dublin Heritage Park and Museums to the east; I-580 to the south; and Dublin Boulevard to the north (see Figure 2. Project Site). To the north of Dublin Boulevard and to the east of the Dublin Heritage Park and Museums and cemetery are single-family houses. Approximately a mile to the west is Dublin Hills Regional Open Space Preserve.

Regulatory Framework

City of Dublin General Plan

The City of Dublin General Plan was adopted by the City Council on February 11, 1985, and amended February 15, 2022. The City of Dublin General Plan is a policy document guiding future development within the City and is a comprehensive plan intended to guide growth and development. In accordance with Government Code Section 65300, the General Plan includes policies for the entire Planning Area, including the City limits proper, and those areas outside the City limits that bear relation to Dublin's planning. The General Plan contains 12 elements that address many aspects of the community including: land use, housing, parks and open

space, community design, infrastructure, safety, sustainability, and conservation of resources. The Land Use Element is considered the framework for the General Plan because it establishes development and land use patterns that enhance the City's character.

All relevant General Plan policies are described in each technical section of this Initial Study, as appropriate. There are no additional General Plan policies applicable to land use and planning that are not already addressed in the other resource sections of this Initial Study.

General Plan Land Use Designation

The Project site is designated as Business Park/Industrial in the City's General Plan. This designation allows non-retail businesses, such as research, limited manufacturing and distribution activities, and administrative offices, that do not involve heavy trucking or generate nuisances due to emissions, noise, or open uses (City of Dublin 2022).

Dublin Village Historic Area Specific Plan

The site is also located in the Dublin Village Historic Area Specific Plan boundaries. The purpose of the Specific Plan area is to protect and preserve historical resources, and further enhance the area with development that is compatible with the historic buildings and remnants of the area. The District's boundary extends from Cronin Circle to I-580 and San Ramon Road to Hansen Drive, including portions west of Hansen Drive along Dublin Boulevard. The District encompasses approximately 40 acres (City of Dublin 2014).

Consistent with the City of Dublin General Plan, the Project site is designated as Business Park/Industrial in the Dublin Area Village Specific Plan (City of Dublin 2014). The Specific Plan indicates that the Project site could accommodate up to 154,202 square feet of development with a floor-area ratio of 0.30 to 0.40. There are no Specific Plan land use and planning policies applicable to the proposed Project.

City of Dublin Zoning Ordinance

Title 8 of the City's Municipal Code establishes the City of Dublin Zoning Ordinance, which sets cohesive zoning rules for the City and designates land use types. Ch. 8.12 establishes zoning districts, adopts an official Zoning Map, shows equivalent zoning districts between the new Zoning Ordinance and the former Zoning Ordinance, determines permitted land uses and conditionally permitted land uses, and establishes decision maker authority for such conditionally permitted land uses. The City's Zoning Ordinance is the primary implementation tool for the goals and policies contained in the Land Use Element. For this reason, the Zoning Map must be consistent with the General Plan Land Use Map.

Parcels 1 and 2 are zoned by the City as Light Industrial (M1) (referenced in Section 8.28 of the Dublin Municipal Code). The M-1 zoning district is intended to provide for the continued use, expansion, and new development of light industrial use types in proximity to major transportation corridors, and to ensure compatibility with adjacent residential and commercial uses. Permitted uses in the M-1 zoning district include ambulance service; laboratory; office; commercial; industrial, such as printing and publishing or research and development

laboratory; storage of petroleum products for on-site use; trucking terminal; and warehousing and distribution.

Parcel 1 is further zoned as PD under Ordinance No. 80-60. The existing PD Ordinance No. 80-60 for the Project site was approved by the Alameda County Board of Supervisors on July 10, 1980. The ordinance states conditional uses consist of pharmacies, research and development laboratories, light manufacturing, and banks.

The intent of the PD designation is to create a more desirable use of the land, a more coherent and coordinated development, and a better physical environment than would otherwise be possible under a single zoning district or combination of zoning districts. A PD Zoning District is established by the adoption of an Ordinance reclassifying the property to such district and adopting a Development Plan, which establishes regulations for the use, development, improvement, and maintenance of the property within the PD district (Section 8.32 of the Dublin Municipal Code).

Project Impacts and Mitigation Measures

(a) Physically divide an established community (No Impact)

Access to residential neighborhoods in the vicinity of the Project site would be maintained during construction. There would be no closure of any publicly accessible roadway that provides connectivity between the existing neighborhoods north of Dublin Boulevard in the vicinity of the Project site. All construction activities, including staging areas, would be on the Project site. Therefore, construction of the proposed Project would not introduce a physical feature that would create a barrier, divide, or separate adjacent uses during construction. Therefore, physical division of an established community would not occur due to construction of the proposed Project. There would be **no impact.**

There are no residential land uses within the Project site. The nearest established community is located north of Dublin Boulevard, north of the Project site. The proposed Project would demolish the existing 62,715 square foot industrial building and development of a new 125,304 square foot building. Site improvements would include landscaping; parking; a fire access road; circulation improvements for truck access and loading and unloading materials; utilities; pavement and grading to treat site drainage. Overall, the Project would not result in any permanent road closures or introduce any physical feature that would create a barrier, divide, or separate adjacent uses. Therefore, physical division of an established community would not occur due to operation of the proposed Project. There would be **no impact.**

(b) Conflict with land use plan, policy, or regulation (No Impact)

According to CEQA, policy conflicts do not, in and of themselves, constitute a significant environmental impact. Policy conflicts are considered to be environmental impacts only when they would result in direct physical impacts or where those conflicts relate to avoiding or mitigating environmental impacts. For an impact to be considered significant under this threshold, any inconsistency would also need to result in a significant adverse change in the environment not already addressed in the other resource sections of this Environmental Impact Report (EIR). These technical sections provide a detailed analysis of other relevant physical

environmental effects that could result from implementation of the proposed Project and identify mitigation measures, as necessary, to reduce impacts to less than significant levels.

The proposed Project would demolish the existing 62,715 square foot industrial building and develop a new 125,304 square foot building. The new building would cater to future tenants in the R&D and life sciences field (see Figure 3. Site Plan). The proposed Project is consistent with the City General Plan and Dublin Area Village Specific Plan land use designation for the site and no General Plan amendments are required. In addition, the proposed Project would not exceed the Specific Plan's development potential for the Project site (154,202 square feet). The proposed Project is a permitted use within the M-1 zoning district. A Planned Development Rezone would be required for Parcel 1, which provides development standards beyond those of the M-1 zoning, and a new ordinance would be adopted concurrently. With approval of a Planned Development Rezone and adoption of a new PD ordinance, the proposed Project would not conflict with the zoning of the Project site.

Implementation of the proposed Project would not conflict with adopted City General Plan policies or other land use plan, policy, or regulation that would generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this Initial Study (air quality, biological resources, cultural resources, etc.). Therefore, there would be **no impact.**

Source(s)

City of Dublin. 2014. Dublin Village Historic Area Specific Plan.

City of Dublin. 2022. City of Dublin General Plan. Available: https://www.dublin.ca.gov/171/General-Plan#Chapter%207. Accessed March 6, 2023.

Mineral Resources

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
11.	**MINERAL RESOURCES. Would the project:**				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X

Environmental Setting

Minerals are any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat and oil bearing rock, but excluding geothermal resources, natural gas and petroleum. Rock, sand, gravel and earth are also considered minerals by the Department of Conservation when extracted by surface mining operations.

Neither the State Geologist nor the California Department of Mines and Geology (CDMG) have classified any areas in the City as containing mineral deposits that are either of Statewide significance or the significance of which requires further evaluation (California Department of Conservation, 2022).

Regulatory Framework

State Regulations

Surface Mining and Reclamation Act of 1974

The CGS and the California State Mining and Geology Board are required by the Surface Mining and Reclamation Act of 1974 (SMARA) to categorize lands into four Aggregate and Mineral Resource Zones (MRZs), described below. These MRZs classify lands that contain significant regional or Statewide mineral deposits. Lead Agencies are mandated by the State to incorporate MRZs into their General Plans. MRZs are classified on the basis of geologic factors without regard to existing land use and land ownership.

The four MRZs are categorized as follows:

- MRZ-1: An area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2: An area where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.

- MRZ-3: An area containing mineral deposits, the significance of which cannot be evaluated.
- MRZ-4: An area where available information is inadequate for assignment to any other MRZ zone.

Of the four categories, lands classified as MRZ-2 are of the greatest importance because such areas are underlain by demonstrated mineral resources or are located where geologic data indicate that significant measured or indicated resources are present. MRZ-2 areas are designated by the State Mining and Geology Board as being "regionally significant." Such designations require that a Lead Agency make land use decisions involving designated areas in accordance with its mineral resource management policies and that it consider the importance of the mineral resource to the region or the State as a whole, not just to the Lead Agency's jurisdiction.

Project Impacts and Mitigation Measures

(a-b) Loss of known or identified mineral resource (No Impact)

The Project site is not located in a designated mineral resource area (California Department of Conservation 2022). Therefore, the proposed Project would not result in the loss of available of a known mineral resource that would be of value to the region and residents of the state or the loss of availability of any locally known important mineral resource recovery site. Therefore, there would be **no impact** regarding mineral resources.

Source(s)

California Department of Conservation. 2022. Surface Mining and Reclamation Act (SMARA) Mineral Lands Classification Portal. Accessed: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc.

Noise

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?			X	
b) Generation of excessive ground borne vibration or ground borne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Environmental Setting

Noise Background

Sound is a physical phenomenon generated by vibrations that result in waves that travel through a medium, such as air, and result in auditory perception by the human brain. Noise is usually defined as unwanted or disruptive sound. Whether something is perceived as a noise event is influenced by the type of sound, the decibel level of the sound, the perceived importance of the sound, its appropriateness in the setting, the time of day, the type of activity during which the noise occurs, and the sensitivity of the listener. Local jurisdictions may have legal definitions of what constitutes “noise” and such environmental parameters to consider. The amplitude of noise is measured in decibels (dB) using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above approximately 110 dB begin to be felt inside the human ear as discomfort and eventually as pain at 120 dB and higher levels.

The minimum change in the sound level in an outdoor noise environment that an average human ear can perceive is about 3 dB. A change of 5 dB or greater is readily perceived, and a change in sound level of 10 dB usually is perceived as a doubling of the sound’s loudness[2].

[2] Caltrans. 2003. Technical Noise Supplement to the Traffic Noise Analysis Protocol.

Most sounds perceived by the human ear in the environment do not consist of a single frequency but instead are composed of a broad band of frequencies differing in sound level. The method commonly used to quantify environmental sounds consists of evaluating all frequencies of a sound according to a weighting system that reflects the typical frequency-dependent sensitivity of average healthy human hearing. This is called "A-weighting," and the decibel level measured is referred to as dBA.

Environmental noise levels vary continuously and may include a mixture of noise from near and distant sources generated by combinations of events of short-period (e.g., vehicle pass-by) and long-period (e.g., power plant) duration. A single descriptor, equivalent sound level (L_{eq}), may be used to describe such sound that is changing in level from one moment to another. L_{eq} is the energy-average sound level during a measured time interval. It is the "equivalent" constant sound level that would have to be produced by a single, steady source to equal the acoustic energy contained in the fluctuating sound level measured.

Sound pressure from a stationary source (i.e., a point source, such as a heating, ventilation and air conditioning [HVAC] unit) propagates uniformly outward in a spherical pattern. The sound pressure level attenuates (or decreases) at a rate of 6 dBA for each doubling of distance from a point source. Highways, trains, and power lines consist of several localized noise sources on a defined path, and therefore can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. In general, sound pressure levels from a line source attenuate at a rate of 3 dBA for each doubling of distance from the source.

Vibration Background

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Groundborne vibration propagates from the source through the ground to adjacent buildings by surface waves, having a frequency measured in cycles per second (Hertz [Hz]). Most environmental vibrations consist of a composite of many frequencies and generally are classified as broadband or random vibrations. The normal frequency range of most groundborne vibration that can be perceived generally ranges between 1 and 200 Hz.

Vibration energy dissipates geometrically as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. Soil properties also affect the propagation of vibration, with stiffer soils, clays, and rock strata enabling more efficient transmission of vibrational energy. On interaction with a building foundation, usually a ground-to-foundation coupling loss occurs; however, the transmitted vibration also can be amplified by structural conditions of the walls and floors, allowing resonance. Vibration in buildings typically is perceived as the rattling of windows or items on shelves, or the motion of building surfaces. At sufficiently high levels and depending on the loudness of the background airborne noise level, the vibration of interior building surfaces can be heard as a low-frequency rumbling sound, also known as groundborne noise.

The peak particle velocity (PPV) and RMS velocity normally are described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration

signal. PPV is the metric often used to describe vibration events that may result in structural stress on affected structures.

Existing Land Uses

Land uses surrounding the Project site include light industrial to the west, retail commercial, and the Dublin Heritage Park & Museums to the east, single and multi-family residential to the north, and commercial directly northeast. The noise-sensitive receptor most vulnerable to both on-site construction and operational noise is a single-family residence (R-5) approximately 165 feet north of the northern Project property line. This property is considered most exposed to Project noise and vibration due to its proximity to project construction work areas, site driveways, and proposed stationary noise sources.

Baseline Noise Measurements

A baseline noise measurement survey was conducted by AECOM for a 24-hour period on January 11, 2023. The baseline measurements were performed with two (2) Larson Davis Model 820 and one (1) Larson Davis Model 831 sound level meters. The two (2) long-term measurements were conducted near residential receptor locations and the three (3) short-term measurements were conducted at various points along the Project property line. The primary observed noise sources at all the measurement locations were traffic along Highway I-580, Dublin Blvd, and Hansen Dr, and bird calls. Table 5: Summary of Measured Sound Levels summarizes the results of the baseline noise survey. Figure 8. Proposed Project Area, Noise Monitoring Locations and Worst-Case Noise-Sensitive Receptors provides the proposed Project layout superimposed on aerial imagery of the study area, baseline measurement locations, and nearest residential receptors (worst-case noise-sensitive land uses used for impact assessment).

Table 5: Summary of Measured Sound Levels

Measurement ID	Daytime[1] Noise Levels (dBA L_{eq})	Evening[2] Noise Levels (dBA L_{eq})	Nighttime[3] Noise Levels (dBA L_{eq})	Average Daily Noise Levels (dBA CNEL)
LT-1	64	62	62	69
LT-2	65	63	60	68
ST-1	68	N/A[4]	N/A[4]	N/A[4]
ST-2	68	N/A[4]	N/A[4]	N/A[4]
ST-3	65	N/A[4]	N/A[4]	N/A[4]

Notes: CNEL = Community Noise Equivalent Level; dBA = A weighted decibel; ID = identification; Leq = Equivalent Sound Level; LT = long term; N/A = not applicable; ST = short term.
[1] Daytime: 7:00 a.m. to 7:00 p.m.
[2] Evening: 7:00 p.m. to 10:00 p.m.
[3] Nighttime: 10:00 p.m. to 7:00 a.m.
[4] Short-term (ST) Measurements were only conducted during daytime periods because the represented land uses are only occupied during daytime hours. ST measurements were conducted for 30 minutes.

Regulatory Framework

Federal Regulations

Federal Transit Administration

Vibration

The Federal Transit Administration (FTA) Manual (FTA Manual) provides guidance for the analysis of vibratory impacts generated by transportation and construction projects by providing thresholds for structural damage and human perception/annoyance. Table 6: Construction Vibration Damage Criteria below shows a curated list of damage thresholds from the FTA Manual, as applicable to various receptors and vibratory source types.

Table 6: Construction Vibration Damage Criteria

Building Category	Peak Particle Velocity (inches/second)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: Transit Noise and Vibration Impact Assessment Manual (FTA 2018), Table 12-3.

The FTA Manual guidelines show that a PPV vibration level of up to 0.2 in/sec is considered safe for non-engineered timber and masonry buildings and would not result in any construction vibration damage. Therefore, in order to be conservative, the 0.2 in/sec PPV threshold has been used when evaluating vibration impacts at the nearest structures to the Project site.

Noise

The criteria for environmental impacts resulting from construction noise are based on the FTA "general assessment" guidelines for assessing construction noise effects which are based on the maximum sound levels generated from the two noisiest prices of equipment for each phase of construction.

Table 7 summarizes the FTA general assessment construction noise criteria for each land use.

Table 7: FTA General Assessment Noise Criteria

	L_{eq}.equip (1hr), dBA	
Land Use	**Day**	**Night**
Residential	90	80
Commercial	100	100
Industrial	100	100

Notes: dBA = A-weighted decibel; FTA = Federal Transit Administration; L_{eq} = Equivalent Sound Level
Source: Transit Noise and Vibration Impact Assessment Manual (FTA 2018), Table 7-2.

The FTA Manual guidelines show that the applicable construction noise criterion for residential land uses is 90 dBA (1-hour L_{eq}) during the daytime (7 a.m. to 4 p.m.). The proposed construction activities for the Project will be limited to daytime therefore, the 90 dBA construction noise criterion will be applied for noise-sensitive residential properties around the Project site.

Local Regulations

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 exposure assessed at the property line of the receiving land use (City of Dublin 2016). The land use compatibility noise criteria as shown in Table 8: City of Dublin Land Use/Noise Compatibility Standards (dBA, CNEL), provide the bases for decisions on the siting or proposed land uses in relation to existing or planned noise sources and for determining noise mitigation requirements.

Table 8: City of Dublin Land Use/Noise Compatibility Standards (dBA, CNEL)

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	-

Source: Dublin General Plan Noise Element, Table 9-1, 2012
Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel
Normally Acceptable: Specific land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features, included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable: New construction or development should generally not be undertaken.

City of Dublin Municipal Code

The Dublin Municipal Code includes standards pertaining to noise control within the City. Municipal Code Section 5.28.020 prohibits any person within the City to make any loud, disturbing, unnecessary, unusual, habitual noise; or any noise which annoys, disturbs, injures, or endangers the health, repose, peace, or safety of any reasonable person of normal sensitivity present in the area.

Since the City of Dublin Municipal code does not provide explicit limits that would be applicable for the assessment of noise impacts generated by operation of the Project, the Alameda County Code of Ordinances, Title 6 – Health and Safety, Chapter 6.60 – Noise, 6.60.040 – Exterior noise

level standards were determined to be the best-available alternative regional threshold and are provided in Table 9: Alameda County Exterior Noise Level Standards below.

Table 9: Alameda County Exterior Noise Level Standards

Land Use Category	Cumulative Number of Minutes in Any One (1) Hour Time Period	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Single/Multiple Family Residential	30	50	45
Schools	15	55	50
Hospitals	5	60	55
Churches	1	65	60
Public Libraries	0	70	65

Source: Alameda County 2022

Project Impacts and Mitigation Measures

(a) Generate noise exceeding standards (Less Than Significant Impact)

The short-term construction and long-term noise impacts associated with the proposed Project are described below.

Construction Noise Prediction and Results

Construction would occur Monday through Friday from 7 a.m. to 4 p.m. for approximately 12 months. General construction efforts would occur, on average, approximately 430 feet from the geometric center of the overall construction work area to the nearest residential structure at R-5.

The construction noise assessment was conducted using construction prediction methodologies based on the FTA manual. Utilization factors for construction equipment (or the percentage of time in a given hour that a piece of equipment is operating at maximum power) as recommended for FTA detailed assessments, were also included in the calculations to help accurately predict construction noise levels during the various construction phases. The compliance assessment for this analysis focused on predicted 1-hour L_{eq} levels. Project construction noise was estimated for construction phases by considering the quantities of contributing sound sources and calculating their aggregate sound propagation to the studied nearest receptor location (R5).

The key assumptions for this analysis included in this method are as follows:

- Free-field conditions and no attenuation factors
- For a given construction phase, the two loudest pieces of construction equipment are assumed to operate—on average—from the same source point location at the general geographic centroid of the Project site or stationed range.
- Each piece of equipment or vehicle is assigned a reference maximum noise level (L_{max}) value at a reference distance (e.g., 50 feet), and an "acoustical usage factor" (AUF) that the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User's

Guide (FHWA 2006) describes as an estimated portion of a construction operation time period when the L_{max} value can be expected.

Table 10: Proposed Project Construction Equipment Reference Sound Pressure Levels provides a list of equipment types anticipated to operate during the various project construction phases along with their reference maximum sound level, usage factor, and calculated 1-hour L_{eq} at 50 feet. Since reference sound levels for the listed construction equipment are presented as maximum sound levels (i.e., the maximum sound level the equipment would produce at any moment in time, or L_{max}), the usage factor is applied to account for the fact that equipment is not continuously operated in a full-throttle condition throughout its use. Thus, typical usage factors for each type of construction equipment were applied to reference maximum sound levels to arrive at average hourly sound levels. L_{max} values and usage factors provided herein are generally based on a combination of the RCNM User's Guide and the FTA Manual.

Table 10: Proposed Project Construction Equipment Reference Sound Pressure Levels

Anticipated Project Construction Equipment	L_{max}, dBA at 50 Feet[1]	Usage Factor	Resulting 1-Hour L_{eq}, dBA at 50 Feet[2]
Aerial Lift	75	0.2	68
Air Compressors	78	0.4	74
Concrete/Industrial Saws	90	0.2	83
Cranes	81	0.2	73
Excavators	81	0.4	77
Forklifts	75	0.4	71
Generator Sets	81	0.5	78
Graders	85	0.4	81
Pavers	77	0.5	74
Rollers	80	0.2	73
Rubber-Tired Dozers	82	0.4	78
Tractors/Loaders/Backhoes	84	0.4	80
Welders	74	0.4	70

Source: FHWA RCNM 2006, FTA 2018
Notes: dBA = A-weighted decibel; L_{eq} = Equivalent Sound Level; L_{max}_= maximum noise level
1. L_{max} values are based on representative equipment in RCNM ("Actual Measured" levels) and the FTA Manual.
2. 1-Hour L_{eq} values are calculated by applying the usage factor (reductive adjustment) to the momentary L_{max} reference noise level.

Individual hourly noise levels generated by proposed Project construction equipment would range from 74 to 90 dBA, L_{eq} at 50 feet from the equipment. Following a combination of procedures suggested in the FTA Manual for the general and detailed assessment of construction noise, Table 11: Combined Construction Noise Levels per Construction Phase calculates the combined construction noise level generated by the two loudest pieces of equipment operating during each construction phase and the resulting 1-hour sound level L_{eq} (dBA) at the nearest receptor.

Table 11: Combined Construction Noise Levels per Construction Phase

Construction Phase/Activity	Two Loudest Pieces of Equipment in Phase	Combined 1-hour L_{eq}, dBA at 50'	Combined 1-hour L_{eq}, dBA at Nearest Receptor R5 (430')	Applicable Daytime FTA General Assessment Threshold $L_{eq.equip}$ (1hr), (dBA)
Demolition	Concrete Saw Tractor	85	66[1]	90
Site Preparation	Grader Grader	84	65[1]	90
Grading/Excavation	Grader Tractor	84	65[1]	90
Trenching/Foundation	Tractor Excavator	82	63[1]	90
Building - Exterior	Tractor Generator	82	63[1]	90
Building -Interior/ Architectural Coating	Air Compressor Aerial Lift	75	56[1]	90
Paving	Tractor Paver	81	62[1]	90

Notes: dBA = A-weighted decibel; FTA = Federal Transit Administration; L_{eq} = Equivalent Sound Level
[1] Calculated using distance measured from the geometric center of the overall Project area to receptor (approximately 430') and an acoustical attenuation rate of 6 decibels per doubling of distance from the source.

Table 11 shows that project construction activities will not exceed the FTA general assessment construction noise criteria of 90 dBA, L_{eq} at the nearest noise-sensitive receptor. Since construction activities are not expected during nighttime hours, construction activities are not predicted to generate adverse effects at any adjacent noise-sensitive properties. Therefore, there would be a **less than significant impact** related to noise during construction.

Operational Noise Prediction

Table 12: Modeled Noise Sources provides the noise sources included in the acoustic model, corresponding quantity, and reference A-weighted sound power levels.

Table 12: Modeled Noise Sources

Equipment Name	Quantity Modelled	Reference A-Weighted Sound Power Level (dBA)
Rooftop HVAC	9	79[2]
Truck Activities[1]	1	104

Notes: dBA = A-weighted decibel; HVAC = heating, ventilation and air conditioning
[1] "Truck Activities" represent one (1) truck that is assumed to operate continuously during facility operating hours. The reference sound power level represents an assortment of truck movements, loading activities, engine idling, and truck trailer coupling noise based on sound pressure level measurements conducted by AECOM in November 2022.
[2] Sound power levels provided by Carrier for the 50FCQM07 unit. Modeled as a point source at an elevation of 4.5 feet above the project roof height.

Operational Noise Modeling Results

The CadnaA® Noise Prediction Model (Version 2022) was used to estimate the propagation of sound from project operations from stationary (Rooftop HVACs), and non-stationary (Truck Activities) sources, and thereby to predict SPL at various distances from the Project area, including representative noise-sensitive receptors selected for the ambient sound survey. CadnaA is a Windows-based software program that predicts and assesses sound levels near industrial sound sources and is based on International Organization for Standardization (ISO) 9613-2 algorithms for the calculation of sound propagation (ISO 1996). The calculations account for classical sound wave divergence plus attenuation factors resulting from air absorption, basic ground effects, and barrier/shielding.

Additional CadnaA model configuration settings and operations noise analysis assumptions were as follows: 10 degrees Celsius outdoor temperature, 70 percent relative humidity, calm wind conditions (less than 0.5 meters per second), one order of acoustic reflections, and a ground absorption co-efficient of 0.5 representing a conservative mixture of hard and soft ground surfaces. These assumptions were selected as they represent conservative meteorological conditions for sound propagation that are expected to occur at the Project site. These are the only predicted noise sources associated with project operation.

Figure 9. Distribution of Modeled Noise Sources Assumed for Project Operations shows the primary facility noise sources included in the acoustic model.

Table 13: Predicted Proposed Facility Operational Sound Levels (dBA) shows predicted project operational sound levels for both daytime facility operations at all studied receptors.

Table 13: Predicted Proposed Facility Operational Sound Levels (dBA)

Noise-Sensitive Receptor ID	Predicted Daytime (7:00 AM – 7:00 PM) Sound Level	Applicable Limit[1]	Exceeds Limit?
R-1	39	50	No
R-2	42	50	No
R-3	40	50	No
R-4	39	50	No
R-5	47	50	No

Notes: dBA = A-weighted decibel; ID = identification
1 Alameda County Noise ordinance – Daytime (7:00 a.m. to 10 p.m.) noise level standards for single or multi-family residential land uses.

As shown in Table 13, the predicted daytime operational noise levels are below the applicable noise limits. Therefore, there would be **a less than significant impact** regarding noise from stationary sources.

Traffic Noise Prediction

Daily traffic volumes from existing facility operations amount to approximately 695 trips per day traveling on Dublin Boulevard, primarily occurring during typical daytime business hours (e.g., 7 a.m. to 6 p.m.). Operation of the proposed Project is expected to result in a net reduction of 201 trips per day, for a total of 494 project trips per day upon completion.

The closest noise-sensitive receptor (R5) to the Project site is a single-family residential building on the north side of Dublin Boulevard. The existing and future with-project worst-hour (i.e., peak traffic volume) sound level (L_{eq}) was calculated at five receptors in the Project area using the Federal Highway Administration Traffic Noise Model Version 2.5. Data used in these calculations included existing (2022) daily peak-hour traffic volumes and truck mixes and future-year (2040) daily peak-hour traffic volumes and truck mixes[3] to account for any growth in non-project-related traffic volumes. These traffic volumes are included in Table 14: Peak-Hour Traffic Volumes below, and the results of these calculations are shown in Table 15: Predicted Existing and Future-with-Project Worst-Hour Traffic Noise Levels below.

Table 14: Peak-Hour Traffic Volumes

Roadway	Existing Peak-Hour Volumes		Future With Project Peak-Hour Volumes	
	Car	Truck	Car	Truck
Hansen Dr | North of Dublin Blvd	219	2	270	2
Dublin Blvd | East of Hansen Dr	1375	8	1671	23
Dublin Blvd | West of Hansen Dr	1111	6	1366	6
Hansen Dr | South of Dublin Blvd	69	0	71	15

Table 15: Predicted Existing and Future-with-Project Worst-Hour Traffic Noise Levels

Receiver ID	Existing Traffic Noise Level (dBA, L_{eq})	Future With-Project Traffic Noise Level (dBA, L_{eq})	Change in Traffic Noise Exposure (dBA, L_{eq})
R-1	47	48	+ 1
R-2	56	57	+ 1
R-3	60	61	+ 1
R-4	58	59	+ 1
R-5	61	62	+ 1

Notes: dBA -= A-weighted decibels; ID = identification

The operational noise modeling assumed the proposed Project would include 18,000 square feet of office space, 36,500 square feet of light industrial space, and 70,804 square feet of warehousing space. Based on the latest site plan, the proposed Project would actually include 18,000 square feet of office space, 30,000 square feet of light industrial space, and 77,304 square feet of warehousing space. As light industrial land uses generate higher daily vehicle trips than warehousing land uses, daily vehicle trips and the associated mobile source emissions are anticipated to be lower (i.e., the noise modeling assumed the proposed Project would generate 494 daily trips, based on the 2022 Transportation Impact Study [W-Trans 2022]); however, under the revised site plan, the proposed Project is anticipated to generate approximately 473 daily trips. As such, the emissions presented above are conservative and actual traffic noise is anticipated to be lower. Implementation of the proposed Project would result in a higher net reduction in traffic noise compared to existing conditions.

[3] W-Trans, 2022, Final Transportation Impact Study for the Hexcel Redevelopment Project

As shown in Table 15, predicted traffic noise levels are expected to increase at all modeled receivers by a maximum of 1 dBA, L_{eq}. These increases are likely due to increases in non-project-related traffic, due to the expected net decrease in project trips. This maximum increase is below the perceptible threshold. However, since project would generate noise due to traffic, the impact would be less than significant.

(b) Generate excessive ground borne vibration or ground borne noise (Less Than Significant Impact)

Construction activities can generate ground-borne noise and vibration of varying degrees based on the construction activity and equipment, soil conditions, and distance to vibration-sensitive structures or land uses. Vibration associated with project construction activities would occur most notably during major ground-disturbing activities, such as site grading. The piece of construction equipment generating the strongest vibration would be the dozer which, per the FTA Manual, can generate a vibration level of up to 0.089 PPV in/sec at 25 feet. With the closest residential structure as close as 430 feet from the potential operation of dozers used during grading, vibration was assessed at this distance using Equation 7-2 from the FTA Manual. At approximately 430 feet, a dozer will result in a vibration level of 0.001 PPV in/sec at the closest residential unit which is well below the 0.01 PPV in/sec vibration perception threshold and below the construction vibration damage criteria of 0.2 PPV.

There are historical gravestones east of the proposed facility, about 100 ft from the nearest construction zones. Vibration levels due to construction may reach up to 0.011 PPV at the gravestones which are well below the construction vibration damage criteria of 0.2 PPV. Therefore, there would be a less than significant **impact** related to vibration during project construction.

Vibration generated on-site during project operation would be negligible and thus, dismissed from this study due to the relative distances to vibration-sensitive receptors. Vibration associated with facility operations would occur most notably during the use of trucks around the facility. A loaded truck can generate a vibration level of up to 0.076 PPV in/sec. With the closest residential structure as close as 135 feet from the potential operation of trucks, this will result in a vibration level of 0.0006 PPV in/sec at the closest residential unit, which is well below the vibration perception threshold of 0.01 PPV in/sec. Therefore, there would be **no impact** related to vibration during project operation.

(c) Excessive noise level near a private airport (No Impact)

The Project site is not located within two miles of any public or private airport and the closest airport is approximately 6 miles away. Therefore, the proposed Project would not result in the exposure of people residing or working in the project area to excessive noise levels. Thus, there would be **no impact**.

Source(s)

Alameda County. 2022. Code of Ordinances, Title 6 – Health and Safety, Chapter 6.60 – Noise.

Caltrans. 2003. Technical Noise Supplement to the Traffic Noise Analysis Protocol. CT-HWANP-RT-13-069.25.2

City of Dublin. 2016. General Plan. Chapter 9, Environmental Resources Management: Noise Element.

Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction Noise Model User's Guide. FHWA-HEP-05-054.

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123.

International Organization for Standardization (ISO). 1996. Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation.

W Traffic Engineering Transportation Planning (W-Trans). 2022. Final Transportation Impact Study for the Hexcel Redevelopment Project. December.

Population and Housing

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Environmental Setting

According to the City of Dublin General Plan, in 2010, Dublin's total population was estimated at 46,036 and represented 17 percent of the 269,437 residents in the Tri-Valley area (City of Dublin 2022). Between 2010 and 2020, the population increased to 65,161 residents representing an increase of 42 percent (California Department of Finance 2021). The number of housing units increased from 15,782 units to 23,567 units, or an increase of 49 percent, over the 10-year period (California Department of Finance 2021). U.S. Census Bureau 2021 American Community Survey indicates 10,837 residents in the City of Dublin were employed in the professional, scientific, and management industries in 2020 (U.S. Census Bureau 2021).

As of January 1, 2022, the California Department of Finance (DOF) estimates the City's total population was 72,932 persons and 24,977 housing units (DOF 2022). The Project site consists of an existing 62,715-square-foot industrial building. No residential units currently exist at the Project site.

Project Impacts and Mitigation Measures

(a) Population growth (No Impact)

A project's impacts caused by inducing substantial unplanned population growth are analyzed based on the following three inquiries: (1) does the project induce unplanned population growth (direct or indirect), (2) is that growth substantial, and (3) does this substantial unplanned growth result in significant adverse environmental impacts. As discussed below, the proposed Project would not involve construction of new homes, generate substantial new employment opportunities, or extend roadways or other infrastructure that would directly or indirectly induce unplanned population growth.

The proposed Project would demolish the existing 62,715-square-foot industrial building and develop a new 125,304-square-foot building. The number of onsite construction workers would vary depending on the construction phase, but it is anticipated for a project of this scope to

range from 7 to 64 workers over a 12-month period. The source of the construction labor force is unknown at this time, but workers would be expected to come from the local labor pool and not relocate to the City from other areas for the relatively short construction period. According to the most current labor data available from the U.S. Census Bureau 2021 American Community Survey, 798 residents in the City of Dublin and 43,577 residents in Alameda County as a whole were employed in the construction industry in 2020 (U.S. Census Bureau 2021). Based on the availability of nearby construction workers, Project construction would not cause a substantial influx of construction personnel that would result in unplanned population growth or a substantial increase in housing demand in the region.

The existing employees onsite each day is 150 to 200. The proposed building would cater to future tenants in the R&D and life sciences field, and it is estimated that the proposed Project would have 200 employees [4] onsite each day. Therefore, it is expected that similar number of employees would be working at the Project site as compared to existing conditions. Thus, the Project would not result in unplanned population growth. Furthermore, the Historic Area Specific Plan identified the Project site for a similar amount of R&D and industrial floor space.

The proposed Project would not induce substantial population growth indirectly (through the extension of roads or other infrastructure into undeveloped areas). The proposed Project would be an infill project with the new building and infrastructure improvements occurring within the Project site. Any new utility infrastructure required to serve the proposed Project would be sized to accommodate Project-related demands and would not be intended to serve any development on lands other than the Project site.

For the reasons described above, the proposed Project would not directly or indirectly induce substantial unplanned population growth, and **no impact** would occur.

(b) Housing and resident displacement (No Impact)

The Project site does not contain residences. Therefore, the proposed Project would have **no impact** related to the displacement of substantial numbers of people or existing housing that would necessitate construction of or replacement housing elsewhere.

Source(s)

ABAG. 2011. ABAG Non Residential Buildings Analysis. Obtained March 8, 2023 from NonResidentialAnalysis_120511.pdf (ca.gov).

California Department of Finance. 2021. E-5: Population and Housing for Cities, Counties, and the State, January 2011-2020, with 2010 Benchmark. Obtained March 8 from https://dof.ca.gov/forecasting/demographics/estimates/estimates-e5-2010-2020/.

California Department of Finance. 2022. E-5: Population and Housing for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark. Obtained March 8, 2023 from

[4] Based on ABAG average square feet per employee rates for each "principal building activity" (ABAG 2011).

https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/.

City of Dublin. 2022 (February). City of Dublin General Plan. Available: https://www.dublin.ca.gov/171/General-Plan#Chapter%207. Accessed March 6, 2023.

U.S. Census Bureau. 2021. American Community Survey 1-Year Estimates. DP03: Selected Economic Characteristics. Accessed March 6, 2023 from https://data.census.gov/table?q=DP03:+SELECTED+ECONOMIC+CHARACTERISTICS&g=0500000US06001_1600000US0620018&tid=ACSDP1Y2021.DP03.

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Public Services

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a) Fire protection?				X
b) Police protection?				X
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X

Environmental Setting

The proposed Project is located within the City of Dublin and is served by the following existing public services (City of Dublin 2022).

Fire Protection

Fire suppression, emergency medical and rescue services, and other life safety services are provided to the Project area and Project site by the Alameda County Fire Department (ACFD). There are three fire stations in Dublin, with the closest to the Project site being Fire Station No. 16 at 7494 Donohue Drive, approximately 0.7 miles northeast.

Police Protection

Dublin Police Services, which is contracted with the Alameda County Sherriff's Office, provides contracted police protection to the Project area and Project site. Dublin Police Services has 62 sworn personal along with four County civilian personnel who provide public safety to the City as well as four professional staff members and a three-member Behavioral Health Unit. The Dublin Police Services headquarters are located at 6361 Clark Avenue, approximately 1 mile northeast of the Project site.

Schools

The Project site is served by the Dublin Unified School District, which operates seven elementary schools, two middle schools, one kindergarten through 8, a comprehensive high school, and a continuation high school within the City of Dublin.

Parks

The City's Public Works Department oversees the maintenance of parks and recreational facilities throughout the City. See Section 15, Recreation for more details.

Other Public Services

The Dublin Library is operated by Alameda County Library, with additional funding from the City of Dublin. The Dublin Public Library is located at 200 Civic Plaza, approximately 1.5 miles east of the Project site. The nearest United States Postal Service to the Project site is 1 mile to the east.

Regulatory Framework

Federal and State Regulations

California Fire Code

The California Fire Code exists within Part 9 of the CBC and includes measures for emergency planning preparation and safety. Examples of fire safety requirements include: installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

Local Regulations

City of Dublin General Plan

Chapter 3 of the Land Use Element outlines policies and programs to provide open space both within and apart from development projects, which relate to the provision of park facilities in the City. Those policies are listed in Section 15, Recreation.

Section 8.3.2 of the City of Dublin outlines the following policies and programs related to fire hazards and fire protection (City of Dublin 2022):

- **Implementing Policy 8.3.2.1.B.1.** Continue to enforce the City's wild land urban interface regulations.

Project Impacts and Mitigation Measures

(a, b) Fire and Police Services (No Impact)

The construction of the proposed Project could result in a small, temporary increase in the demand for fire suppression, emergency medical services and sheriff services, due the temporary presence of construction personnel in the area. The number of construction personnel would vary with each construction phase, but it is anticipated for a project of this scope to range from 7 to 64 workers. Local, state and federal worker safety regulations would be adhered to, in order to minimize the likelihood of workplace injuries and accidents requiring emergency medical attention, including the California Division of Occupational Safety and Health. Typical fire and safety precautions would be taken, such as prohibiting onsite fires; keeping fire extinguishers onsite during construction activities; discarding smoking materials in approved containers and maintaining access to fire hydrants and emergency vehicle access.

Construction activities would not necessitate new or physically altered fire and police facilities or need for new or physical altered these facilities. Therefore, there would be no impact during construction.

During project operation, the use of the Project site would be of a similar nature to the existing use and the number of future employees would be similar to existing numbers. Therefore, an increase in demand for fire protection and police services is not anticipated. ACFD and Dublin Police would continue to provide services to the Project site and would not require additional firefighters or police officers to serve the proposed Project. The Project would be required to comply with the CBC, the California Fire Code and City of Dublin codes, and ordinances and regulations to minimize fire hazards, including fire prevention and suppression measures; fire hydrants and sprinkler systems; emergency access; and other similar requirements. The Project would also implement and maintain a fire access road and six fire hydrants onsite. Therefore, the Project would not require the construction of new or alteration of existing fire protection or police facilities to maintain an adequate level of fire protection and police services. Thus, the proposed Project would not result in new or physically altered fire and police facilities or need for new or physical altered these facilities, which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of these public services. Therefore, there would be **no impact**.

(c) Schools (No Impact)

The proposed Project would not generate additional students in the Dublin Unified School District as no new residential uses are proposed and there would not be any substantial increase in demand for worker housing in the area as number of new of employees is estimated to be similar to the existing number of employees. Nonetheless, appropriate developer impact fees, as required by State law, would be assessed and paid by the Project applicant to offset any potential impact to school facilities. The proposed Project would not require need for new or physical altered school facilities, which could cause significant environmental impacts, in order to maintain acceptable service ratios and performance objectives. Therefore, there would be **no impact**.

(d) Parks (No Impact)

The proposed Project would not contribute to a substantial increase in the population necessitating either construction of new or alteration of existing park facilities to maintain an adequate level of service. No physical impacts associated with the provision of park services would occur. Therefore, the proposed project would not result in the need for new or altered parks, which could cause significant environmental impacts. Thus, there would be **no impact**.

(e) Other public facilities (No Impact)

Future employees working at the proposed Project site may patronize public facilities such as post offices and local library branches operated by the Alameda County Library. However, as described above, employees are likely to come from within the City and surrounding communities and the numbers of future employees would be similar to that of existing conditions; therefore, the proposed project is not anticipated to increase the number of library

patrons or patrons utilizing other public facilities. Therefore, the proposed Project would not result in a need for new or physically-altered public facilities, which could cause significant environmental impacts. Thus, there would be **no impact**.

Source(s)

City of Dublin. 2022. City of Dublin General Plan. February 11. (Amended February 15, 2022).

Recreation

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
15.	**RECREATION. Would the project:**				
a)	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?				X
b)	Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Environmental Setting

The City of Dublin has a variety of recreational facilities including neighborhood parks, community parks, community facilities, a senior center, open space areas and a series of trail networks. According to the City of Dublin Parks and Recreation Master Plan, the City of Dublin currently owns and maintains 24 parks, including 18 neighborhood parks, five community parks, and one nature park totaling a combined 237.04 acres. In addition, the City maintains over 26.26 miles of greenways and trails (City of Dublin 2022). The nearest recreational areas to the Project site include: Maple Park, approximately 0.4 miles to the north; Martin Canyon Creek Trailhead, approximately 0.45 miles to the northwest; Dolan Park, approximately 1 mile to the northwest; and Shannon park, approximately 1 mile to the north. The City has over 59 acres of undeveloped parkland that has either been offered for dedication by landowners or acquired by the City (City of Dublin 2022). In addition, the East Bay Regional Park District (EBRPD) operates the Dublin Hills Regional Park, a large open space park with regional trail connections. This regional park is approximately 2 miles to the west of the Project site. The Iron Horse Trail, approximately 2 miles northeast of the Project site, runs along the Union Pacific/Southern Pacific Railroad right-of-way, connecting Dublin, the Dublin/Pleasanton BART station, and the City of Pleasanton.

Regulatory Framework

Local Regulations

City of Dublin General Plan

Chapter 3 of the Land Use Element outlines policies and programs to provide open space both within and apart from development projects. The following goals and policies related to parks and recreation that are applicable to the proposed Project:

- **Guiding Policy 3.4.1.A.1.** Expand park area throughout the Primary and Extended Planning Areas to serve new development.
- **Implementing Policy 3.4.1.B.1.** Acquire and improve parklands in conformance with the standards and policies in the City's Parks and Recreation Master Plan.
- **Implementing Policy 3.4.1B.2.** Continue to maintain and periodically update the Citywide Parks and Recreation Master Plan. The Master Plan shall provide specific standards for acquiring parkland to support growth planned in the Land Use Element.
- **Implementing Policy 3.4.1.B.3.** The policies set forth below, as implemented through the Parks and Recreation Master Plan and development approvals, constitute the action program for preserving and providing open space for outdoor recreation.

Project Impacts and Mitigation Measures

(a) Increase the use of existing recreation facilities causing deterioration (No Impact)

During construction of the proposed Project, there would be temporary increase in the number of construction personnel in the area; however, demand for recreational facilities is not expected to substantially increase as a result, as it is expected that these workers would come from the existing pool of workers in the Bay Area and that no relocation of additional workers to the area would be needed. Therefore, there would be no increased demand for recreational resources during project construction. Similarly, the operation of the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, as the Project would not be inducing growth in the project area and the number of future employees is estimated to be similar to existing numbers. Therefore, there would be **no impact**.

(b) Propose, require new facilities that cause physical effect (No Impact)

As discussed in Impact a above, increased demand of recreational resources is not expected as a result of construction or operation of the proposed Project. The Project would not include construction of recreational facilities nor is it required to construct or expand recreational facilities. However, the proposed Project would include private green spaces within the project site, such as landscaping and a plaza at the main building entrance, and outdoor areas for use by employees during breaks. The environmental impacts of constructing these features are analyzed as part of the project, within the various sections of this initial study, and are not considered to be public recreational facilities Therefore, there would be **no impact**.

Source(s)

City of Dublin. 2022. City of Dublin General Plan. Amended February 15, 2022.

City of Dublin. 2022. Parks and Recreation Master Plan. Obtained February 11, 2023 from https://dublin.ca.gov/DocumentCenter/View/5063/Park-and-Recreation-Master-Plan---2022-Update?bidId=.

Transportation

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
16.	**TRANSPORTATION/TRAFFIC. Would the project:**				
a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d)	Result in inadequate emergency access?				X

The information provided in this Transportation section is summarized from the Final Transportation Impact Study for the Project prepared by W-Trans on December 2022 and an addendum that was made to the traffic study on April 6, 2023 to account for a change in the previous project description, which reduced the size of the light industrial space and increased the warehouse space, thereby reducing traffic generation of the Project and the amount of required parking stalls. The traffic study and addendum are provided in Appendix E of this Initial Study/EIR.

Environmental Setting

Regional access to the Project site is provided by I-580 and I-680. Dublin Boulevard provides local access to the Project site. Local roadways, and pedestrian facilities in the vicinity of the Project site are described below.

Dublin Boulevard

Dublin Boulevard is a 7.5-mile-long, two-lane divided, east-west roadway with two 10-foot-wide lanes in each direction that provides local access within the City to both commercial and residential areas. It is located adjacent to the Project site to the north. Dublin Boulevard would provide access to the Project site. The posted speed limit is 35 mph. Continuous sidewalks are provided on the northern and southern sides of the roadway east of Hansen Drive. However, to the west, sidewalks are not provided on the south side of the road. There is a network of curb

ramps, crosswalks with pedestrian phasing at signalized intersections, as well as overhead lighting. In addition, Class I[5] bike lanes exist on the road for 0.3 mile between Inspiration Drive and Silvergate Drive; Class II [6] on-street bike lanes exist on the road for about 0.6 mile between Silvergate Drive and San Ramon Road; and Class III [7] bike route exists on the road for 0.9 mile between San Ramon Road and Clark Avenue. On-street parking is prohibited.

San Ramon Road

San Ramon Road is a two-lane divided, north-south roadway that provides local access within the City to both commercial and residential areas. It is located approximately 1,200 feet from the Project site to the east. The posted speed limit is 35 mph. Sidewalks are provided on the eastern and western sides of the roadway east of Hansen Drive. However, sidewalks are not provided on the south side of Dublin Boulevard. Also, on-street bicycle lanes are provided on either side of the street. A Class II bike lane is present for 1.5 miles between Alcosta Boulevard and Dublin Boulevard. On-street parking is prohibited.

Silvergate Drive

Silvergate Drive is a two-lane divided, north-south roadway that connects Dublin Boulevard to the south to San Ramon Road to the north. It is located approximately 900 feet from the Project site to the northwest. The posted speed limit is 25 mph. Sidewalks are provided on the eastern and western sides of the roadway. A Class II bike lane is present for 1.1 miles between Dublin Boulevard and San Ramon Road. On-street parking is allowed.

Hansen Drive

Hansen Drive is a local street serving single-family residential homes, which is located to approximately 150 feet from the Project site to the north. Sidewalks are provided on the eastern and western sides of the roadway. Crosswalks are provided at Silvergate Drive, Amarillo Road, and Dublin Boulevard. Overhead streetlights are also provided. A Class III bike lane exists on each side of the street for 0.4 mile between Silvergate Drive and Dublin Boulevard. On-street parking is allowed.

Dublin Boulevard and Hansen Drive Intersection

This is a four-way signalized intersection with protected left-turns on both the eastbound and westbound approaches along Dublin Boulevard. The intersection also contains marked crosswalks along the north and east legs of the intersection. The southern leg is a driveway for the Project site.

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[5] Class I is a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
[6] Class II is a striped and signed lane for one-way bike travel on the street.
[7] Class III is a lane signing only for shared use with motor vehicles within the same travel lane on the street.

Regulatory Framework

State Regulations

Senate Bill 743 (SB 743)

With the passage of SB 743 (September 27, 2013) and the subsequent adoption of the revised CEQA Guidelines (December 28, 2018), level of service (LOS) can no longer be used as a criterion for identifying significant transportation impacts for most projects under CEQA effective July 1, 2020. LOS measures the average amount of delay experienced by vehicle drivers at an intersection during the most congested time of day, while the new metric VMT measures the total number of daily miles traveled by vehicles on the roadway network and thereby the impacts on the environment from those miles traveled.

In other words, SB 743 changes the focus of transportation impact analysis in CEQA from measuring impacts on drivers to measuring the impact of driving.

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) conducts transportation planning, financing, and coordination for the San Francisco Bay Area, including Alameda County. MTC periodically updates the Regional Transportation Plan, which plans for the development of mass transit, highway, airport, seaport, railroad, bike, and pedestrian facilities. The most current Regional Transportation Plan, Transportation 2035, budgets funding for transportation-related projects. In addition, MTC and ABAG adopted Plan Bay Area 2040 in 2017, which is a State-mandated transportation and land use plan. The Sustainable Communities Strategy outlines a sustainable communities strategy for the region, which aims to integrate transportation, land use, and housing to meet GHG reduction targets established by the California Air Resources Board.

The Alameda County Transportation Commission (Alameda CTC) is an independent special district that aims to provide sustainable, accessible, and community-focused transportation opportunities. The Alameda CTC is the county's congestion management agency, providing countywide transportation planning, design and construction of specific highway, pedestrian, and bicycle improvement projects, as well as the promotion of transit-oriented development. In accordance with California Government Code 65088, the Alameda CTC prepares the Alameda County Congestion Management Program (CMP), which measures the performance of the county's multi-modal transportation system, addresses roadway congestion, and connects transportation and land use. Alameda CTC also maintains a countywide travel model in compliance with Plan Bay Area 2040 and CMP legislation.

The Alameda County CMP contains the following five mandatory elements: (1) level of service monitoring; (2) performance; (3) travel demand management; (4) land use analysis program; and (5) capital improvements. The Alameda CTC has also developed information related to Senate Bill 743 and tools for measuring and reducing vehicle miles travelled (Alameda CTC 2014).

Local Regulations

City of Dublin General Plan

Chapter 5.0, Land Use and Circulation: Circulation and Scenic Highways Element, identifies the City's transportation and roadway policies (City of Dublin 2022). As described in the City of Dublin General Plan, the City aims to provide a comprehensive circulation network that supports multiple modes of transportation including private vehicles, transit, cycling, and walking. The following policies from the City of Dublin General Plan relate to the proposed Project:

- **Implementing Policy 5.2.2.B.2.** Design and construct all roads in the City's circulation network as defined in Figure 5-1 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.
- **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 5.5.1.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.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.1.** Complete the bikeways systems illustrated on Figures 5-3a and 5-3b (in the General Plan).
- **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.

City of Dublin Municipal Codes

Municipal Code 8.76.070. Part of the City's Development Standards, which states that bicycle parking requirements shall conform to the California Building Standards Code. The California Building Standards Code states that the number of short-term and long-term bicycle parking

stalls provided must be equal to or greater than five percent of the number of motorized vehicle parking spaces provided.

Municipal Code 8.76.080. Sets the requirement for the amount of on-site parking stalls, which is based on use types and square footage of those use types (Code Publishing 2022).

City of Dublin Bicycle and Pedestrian Master Plan

The City of Dublin Bicycle and Pedestrian Master Plan provides policies, network plans, prioritized project lists, support programs, and best practice design guidelines for bicycling and walking in Dublin. The Plan indicates that Class II bicycle Lanes are proposed along Dublin Boulevard adjacent to the Project site (City of Dublin 2023).

Project Impacts and Mitigation Measures

(a) Conflict with applicable transportation plans standards, including bicycle and pedestrian facilities (Less Than Significant Impact)

Applicant transportation plans and policies are described above in the Regulatory Setting subsection. In accordance with SB 743, policies relating to level of service are no longer to be considered as part of the CEQA analysis for transportation impacts, even though such policies are still contained in applicable plans and used by agencies outside of CEQA. This discussion therefore focuses on compliance with applicable policies relating to transit, bicycle and pedestrian facilities. The traffic impact analysis prepared for this Project (in Appendix E) includes an analysis of LOS impacts for the City's use outside of CEQA; however, that LOS analysis is not used within this CEQA document to determine the level of significance of environmental impacts from the Project.

Significant impacts to transit services would occur if the Project would create demand for public transit service that exceeds the provided or planned capacity, disrupts existing transit services or facilities, conflicts with a planned transit facility, or conflicts with policies adopted by the City.

Project construction and operation would not substantially increase demand for transit services. During project construction, construction workers are not expected to use public transit systems such as buses, bike facilities and pedestrian facilities, as this is not typical for construction workers. During the project operation, the Project would have a similar amount of employees compared to existing conditions, as described in Section 13, Population and Housing. The Project would not result in the need for new transit facilities nor would it conflict with existing or planned transit facilities.

Furthermore, according to the Transportation Impact Study, the operation of the Project is expected to result in an average net reduction of 222 trips per day, and 3 fewer morning peak hour trips and 1 fewer afternoon peak hour trips compared to existing conditions. Therefore, the Project would result in a reduction of traffic on the roadway network in the Project vicinity compared to existing conditions.

Significant impacts to bicycle and pedestrian facilities would occur if the Project would generate demand for pedestrian or bicycle facilities that exceeds the provided or planned capacity,

disrupts existing bicycle or pedestrian facilities, or conflicts with a planned bicycle or pedestrian facility.

Pedestrian and bicycle facilities within the study area are adequate and would be improved upon completion of facilities identified in the City's draft Bike and Pedestrian Plan. The Project would not result in any changes within the Dublin Boulevard right-of-way that would conflict with existing bicycle or pedestrian facilities, or prevent the proposed future installation of Class II bike lanes. Furthermore, the Project would provide 24 bicycle parking stalls on-site, with 12 short short-term and 12 long-term stalls as required by the City's Municipal Code 8.76.070 as described in the Regulatory Framework section. The Project proposes 217 motorized parking spaces; thus, a minimum of 11 short-term and 11 long-term parking stalls for bikes are required.

The Project would also provide adequate parking stalls on-site and would not impact street parking along public roadways. Parking requirements are based on the City's Municipal Code 8.76.080, which require a certain amount of on-site parking stalls based on use types and square footage of those use types. Based on the Project's use types, 217 would be consistent with this municipal code.

Therefore, for all of the reasons described above, the Project would not conflict with applicable transportation plans standards, including bicycle and pedestrian facilities impacts on pedestrian, bicycle, and transit facilities within the study area and impacts would be **less than significant**.

(b) Conflict with CEQA Section 15064.3 (b) (Less Than Significant Impact)

Based on CalEEMod standard construction assumptions for a project of this size and nature (as detailed in Appendix D) project construction activities may generate between 5 and 128 trips per day, with a total construction period of approximately 12 months. Construction trips would cease once construction of the project is complete. Since project construction would be for a short-term and temporary period of time, no long term VMT impacts would occur. Thus, there would be **less than a significant impact** during project construction.

The proposed Project is not anticipated to increase the travel demand to and from the Project site from existing conditions. According to the Alameda County Travel Model, the existing countywide VMT per employee for the East Planning Area is 15.2 miles. Based on Governor's Office of Planning and Research (OPR) Guidance and the City's Traffic Impact Analysis (TIA) Guidelines, a project generating a VMT that is 15 percent or more below this value, or 12.9 miles per employee, would have a less-than-significant VMT impact. The City of Dublin Transportation Impact Analysis Guidelines publishes a screening map which shows that this Project located inside an area with a projected VMT per employee lower than 12.9 miles. A copy of the screening map showing VMT estimates in Dublin is provided in Appendix E. Therefore, the proposed Project would be expected to have a **less than significant impact** related to VMT.

(c) Substantially increase hazards due to a design feature or incompatible use (Less Than Significant)

During project construction, all construction and staging activities would occur on the Project site with no encroachment or alterations of public right-of-way, including pedestrian and

bicycle facilities. As discussed above, Project construction would result in up to 128 traffic trips per day to and from the Project site from construction workers and deliveries of equipment and materials. During peak construction periods, approximately 51 of these trips would be from trucks. These deliveries would be temporary and short-term and are not expected to result in hazards on public roadways. These trips would not be an incompatible use. Therefore, there would be **no impact**.

During project operation, the Project driveways and fire access road would be designed according to the City's and local fire department's specifications, including specifications for sight distance and turn radii for heavy vehicles, discussed further below. The Project does not include any changes to the geometric design of the public roadway (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The Project would introduce similar amounts of heavy truck trips to and from the Project site compared to existing conditions. Truck trips are not considered an incompatible use for Dublin Boulevard.

At driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting to enter the street and the driver of an approaching vehicle. The sight distances along Dublin Boulevard at the Project driveways were evaluated based on sight distance criteria contained in the Highway Design Manual published by California Department of Transportation (Caltrans 2020). The recommended sight distances for driveway approaches are based on stopping sight distance and use the approach travel speed as the basis for determining the recommended sight distance. Based on the posted speed limit of 35 mph, the minimum stopping sight distance required is 250 feet; a review in the field shows that sight distances at the proposed project driveways on Dublin Boulevard each exceed 250 feet to the west and so are adequate. To maintain this sight distance, it is noted that any vegetation near the project's driveways should be trimmed to an appropriate height of less than three feet and trees trimmed so that nothing hangs below a height of seven feet from the surface of the roadway.

For a motorist traveling westbound on Dublin Boulevard intending to turn left into either project driveway, the stopping sight distance looking west along Dublin Boulevard is also greater than 250 feet, providing adequate visibility to allow a following driver to observe and react to a vehicle that may slow before moving into the left-turn pocket before entering the driveway.

Therefore, adequate sight distance is available at the proposed project driveway locations to accommodate all turns entering and exiting the Project site.

Large wheelbase vehicles would be able to access the Project site via the western driveway as illustrated in the vehicle turning template analysis provided in Appendix E. The design vehicle used for the turn analysis is based on the Review of Truck Characteristics as Factors in Roadway Design, Transportation Research Board, 2004, with the Surface Transportation Assistance Act (STAA) Interstate Semi-Trailer (WB-62) vehicle. The WB-62 vehicle has a minimum turning radius of 45 feet, a centerline turning radius of 41 feet, and a minimum inside radius of 7.9 feet. It is noted that the evaluation was limited to only movements between the Project site and the east of the site since this represents the most likely direction of travel based on the City of Dublin Truck Route Map (January 2014). As demonstrated by the analysis, the western driveway can accommodate the WB-62 truck for all movements to and from the east. However,

the analysis also shows that the WB-62 vehicle is unable to access the eastern driveway without striking fixed objects (such as utility poles and a fire hydrant) adjacent to the driveway. Therefore, trucks can feasibly access the site via the western driveway. The eastern driveway is not suitable for access by trucks.

There is a potential for sight distance to be blocked by vegetation. Furthermore, the eastern driveway cannot accommodate large vehicles. Thus, the City will require a condition of approval that would require vegetation maintenance for sight distance to achieve a minimum sight distance of 250 feet at each driveway access point; and a condition of approval that prohibits trucks from accessing the eastern driveway. Therefore, these impacts would be **less than significant**.

(d) Result in inadequate emergency access (No Impact)

Law enforcement, fire, and/or emergency services would be maintained during project construction and operation. All construction and staging activities would occur on the Project site, and construction activities would not fundamentally alter emergency access to the Project site or other properties in the vicinity. Construction for the Project would not require the closure of local roads. If needed, a traffic control plan could be implemented, which would include notification of emergency services. However, due to the small scope of the Project and the fact that no public roads are being affected, a traffic control plan would most likely not be needed. Therefore, project construction would not impede access for emergency vehicles and there would be **no impact**.

During Project operation, the site would be accessible via two driveways along Dublin Boulevard. The western driveway is also the southern leg of the Dublin Boulevard and Hansen Drive intersection. The eastern driveway is located approximately 180 feet east of the Dublin Boulevard and Hansen Drive intersection. The raised median along Dublin Boulevard prohibits left-turn egress from this driveway, though there is a left-turn pocket that accommodates left turns into the site. The primary driveway across from Hansen Drive also provides access to the adjacent land use to the west. Additionally, these driveways would be connected by a 30 to 40-foot-wide fire access route around the perimeter of the proposed building. A 26-foot-wide fire access route along the northern side of the building would allow for aerial apparatus access.

The Project's driveways and internal roadway network would be designed to meet current City standards and so can be expected to accommodate the access requirements for both emergency and passenger vehicles. Therefore, there would be **no impact** on emergency access.

Source(s)

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Tribal Cultural Resources

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
17.	**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:**				
a)	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				X
b)	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 I of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivisil(c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	X			

Environmental Setting

The Project site is located in the Amador Valley, along the north bank of Dublin Creek. The modern address is 11711 Dublin Boulevard, located in the City of Dublin, Alameda County, California. The property is approximately 8.81 acres. The project site is located within the Dublin Village Historic Area Specific Plan, with the Dublin Heritage Park and Museums and Dublin Pioneer Cemetery to the east; Interstate (I-)580 to the south; and a business park to the west.

The Amador Valley is the homeland of the Chochenyo Ohlone (Levy 1978). No known previously recorded tribal cultural resources are within the project APE.

A full tribal cultural context for the project site is provided in the Focused EIR.

Regulatory Framework

State

California Environmental Quality Act ("CEQA")

CEQA requires lead agencies to consider whether projects will impact tribal cultural resources as a separate category of environmental analysis. Tribal cultural resources may or may not also be archeological or historic resources. For clarity, archeological and historic resources are addressed in the cultural resources chapter. In some cases, tribal cultural resources are viewsheds, cultural landscapes, plant gathering areas, or other sacred spaces that are not readily identifiable to people outside of the Tribe. In many cases, tribal cultural resources also include an archaeological component, such as artifacts, features, and sites (with or without human remains). PRC Section 21074 states the following:

(a) "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.

(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. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Section 7050.5b). PRC Sections 5097.94 and 5097.98 also outline the process to be followed in the event that human remains are discovered. If the

coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California NAHC within 24 hours (Section 7050.5c). The NAHC will notify the Most Likely Descendant ("MLD"). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposition of, with appropriate dignity, the Native American human remains, and any cultural or funerary items associated with Native American people.

Assembly Bill (AB) 52

AB 52 (effective July 1, 2015) added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to CEQA, relating to consultation with California Native American tribes, consideration of tribal cultural resources, and confidentiality. AB 52 provides procedural and substantive requirements for lead agency consultation with California Native American tribes and consideration of impacts on tribal cultural resources, as well as examples of mitigation measures to avoid or minimize impacts to tribal cultural resources. AB 52 establishes that if a project may cause a substantial adverse change in the significance of a tribal cultural resource, that project may have a significant effect on the environment. Lead agencies must avoid damaging impacts to tribal cultural resources, when feasible, and shall keep information submitted by tribes confidential unless the information is deemed publicly available by the tribe.

AB 52 requires a lead agency to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation. Section 21080.3.1(d) states that within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency's contact information, and a notification that the California Native American tribe has 30 days to request consultation.

Previous CEQA Documents

The City of Dublin hired the archaeological firm William Self Associates, Inc. (WSA) in 2003 to prepare an *Archaeological Assessment Report of the Donlon Way Specific Plan* (later renamed the Dublin Village Historic Area Specific Plan area). A record search at the Northwest Information Center (NWIC), conducted by WSA, did not identify any previously recorded archaeological sites within the Specific Plan area boundaries, but one new archaeological site was recorded during the pedestrian survey and Archeological High Probability areas were also identified within the Specific Plan area boundaries. The *Archaeological Assessment Report* concluded that there is a moderate-to-high-probability of identifying Native American archeological resources within the Specific Plan area boundaries.

The City of Dublin hired the architectural firm Page & Turnbull, Inc. in 2003 to prepare the *Dublin Historic Resources Identification Project* that was finalized in 2004. The city contracted with Page & Turnbull to identify and map historic resources in an approximately 38-acrea area for a future Specific Plan for the Donlon Way area (later renamed the Dublin Village Historic Area Specific Plan) and to prepare preservation recommendations. Page & Turnbull prepared a historic context of the Dublin Village area and recorded all of the properties in the survey area on Department of Parks and Recreation (DPR) 523 A and B forms.

The Dublin Village Historic Area Specific Plan was adopted by the Dublin City Council on August 1, 2006 under Resolution No. 149-06 and relied on the findings of the *Archaeological Assessment Report of the Donlon Way Specific Plan* and the *Dublin Historic Resources Identification Project*. The approximately 38-acre Specific Plan area included the two project site parcels. Subsequently, three Specific Plan addendum and amendments have been prepared for the Specific Plan. City Council determined that no new significant impacts were identified by the addendums or amendments, and no further environmental analysis was required.

Project Impacts and Mitigation Measures

(a) Listed or eligible for listing in the California Register of Historical Resources (No Impact)

No listed Tribal Cultural Resources are within the Project APE, therefore there will be **no impact** to listed Tribal Cultural Resources.

(b) Significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 (Potentially Significant Impact)

The proposed Project would include excavation of the parking lot to the south of the Hexcel Corporation R&D facility, which is adjacent to the marked boundary of the Pioneer Cemetery. Marked grave sites in the cemetery are within five feet of the Hexcel property fence. Historic documents suggest that the cemetery was larger than the currently marked boundary (Freudenhem 1977). Additionally, there is anecdotal evidence that the cemetery location was first used by the Ohlone, and may also include burials of Native American and Mexican farm laborers who worked for Jose Maria Amador, interred prior to formal consecration of the cemetery in 1859 (VerPlanck 2003). It is likely that the cemetery extends beneath the Hexcel parking lot, and possible that the cemetery includes Native American human remains. If so, the Project impact to Tribal Cultural Resources would be **potentially significant.** This potentially significant impact is further analyzed in the Focused EIR.

Source(s)

City of Dublin Community Development Department. 2014 (updated). Dublin Village Historic Area Specific Plan. Adopted by the Dublin City Council on August 1, 2006, Resolution No. 149-06. Available online: https://www.dublin.ca.gov/DocumentCenter/View/7780/DVHASP-FULL-PDF-10714?bidId=. Accessed April 2023.

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Freudenheim, Richard. 1977. *National* Register of Historic Places Inventory – Nomination Form, Dublin Village Historic Settlement (CA-ALA-521H, P-01-002127). On file at the Northwest Information Center in Rohnert Park, California.

Levy, Richard. 1978. Costanoan. In *Handbook of North American* Indians*, Volume 8,* edited by Robert F. Heizer, 485-495. Washington D.C.: Smithsonian Institute.

VerPlanck, Christopher. 2003. Pioneer Cemetery Site Record (P-01-010637). On file at the Northwest *Information* Center in Rohnert Park, California.

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Utilities and Service Systems

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
18.	**UTILITIES AND SERVICE SYSTEMS. Would the project:**				
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities the construction or relocation of which could cause significant environmental effects?			X	
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project projected demand in addition to the provider's existing commitments?			X	
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e)	Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Environmental Setting

The Project site is within an urban area that is currently served by water storage, treatment, and distribution facilities, wastewater and stormwater collection, and solid waste collection and disposal service systems. These services are described below.

Water

The DSRSD provides potable and recycled water services to the City of Dublin, including the Project site. DSRSD serves approximately 100,400 people and 26,237 potable water accounts to residential, commercial, industrial, and institutional customers. DSRSD manages 3,610 potable water hydrants, 24 recycled water hydrants, 17 potable pump stations, 5 recycled water pump stations, 339 miles of potable water pipes, 72 miles of recycled water pipes, and 223 miles of sewer pipes. DSRSD also manages 14 reservoirs storing 24.98 million gallons (mg) of potable water and 4 reservoirs that store 10.95 mg of recycled water. DSRSD's primary water supply source is purchased potable water from Zone 7, augmented by recycled water produced at

DSRSD's Regional Wastewater Treatment Facility. Zone 7 is a State Water Project contractor that wholesales treated water to four retail water agencies, including DSRSD, Livermore, Pleasanton, and Cal Water Livermore District (West Yost 2021). About 60 percent of the water comes from the State Water Project via the South Bay Aqueduct; 5 percent from local groundwater; 11 percent from local runoff impounded at Lake Del; and about 24 percent from recycled water recovered from wastewater (DSRSD 2023a). Treated potable water enters DSRSD's distribution system from five metered turnouts from the Zone 7 transmission system (West Yost 2021).

To improve the reliability of the Tri-Valley's water supply, particularly in dry years, DSRSD and East Bay Municipal Utility District (EBMUD) created the San Ramon Valley Water Program (SRVRWP) in 1995. The partnership built a water recycling plant adjacent to the DSRSD wastewater treatment facility and a backbone transmission system that connects to DSRSD and EBMUD recycled pipelines to reduce the demand for potable water (City of Dublin 2022).

Wastewater

Wastewater collection and treatment services are also provided by DSRSD for the City of Dublin, including the Project site. DSRSD owns and operates a Regional Wastewater Treatment Facility in Pleasanton that has a capacity of 17 million gallons per day (MGD) average dry weather flow (ADWF). The existing wastewater service area encompasses approximately 13,340 acres, or 20.85 square miles. Within the wastewater service area there are currently 207 miles of gravity mains, one permanent lift station, and one temporary lift station. The permanent lift station has 26 feet of force main (West Yost 2019). DSRSD's provides secondary treatment by activated sludge process (DSRD 2023a).

Stormwater

The Alameda County Flood Control and Water Conservation District (ACFCWCD) provides flood protection to the project area via planning, designing, constructing, and maintaining flood control projects, including natural creeks, channels, levees, pump stations, dams, and reservoirs. The City of Dublin manages and maintains the municipal stormwater system including storm drainpipes and inlets that are on public streets. The City has jurisdiction and maintenance responsibility for local storm drains that discharge to the Zone 7 flood control system. Drainage facilities on private property are maintained by private property owners. Runoff from the Project area drains to underground pipes and open culverts to Dublin Creek, south of the Project site. Dublin Creek ultimately discharges into Las Positas Creek and flows south to San Francisco Bay (Zone 7 2022).

Electricity

The EBCE is a Community Choice Aggregator that procures electricity for residential, business, and municipal accounts to most of Alameda County, including the City of Dublin, utilizing PG&E's distribution system. PG&E handles billing, power outages and maintenance of powerlines and other PG&E infrastructure (EBCE 2023).

Solid Waste

The City of Dublin has a service agreement with Amador Valley Industries (AVI), which provides weekly collection service for compost, recycling, and landfill. Solid waste generated within the City is deposited at the Altamont Landfill which has a total estimated permitted capacity of 124,400,000 cubic yards. The Altamont Landfill has a remaining capacity of 65,400,000, which is approximately 50 percent full and is estimated to reach capacity on December 1, 2070. The landfill is a Class II (designated waste), III (nonhazardous solid waste) with permitted waste types including tires, mixed municipal, industrial, green materials, contaminated soil, ash, and construction/demolition waste (CalRecycle 2019).

The Alameda County Waste Management Authority, now known as Stopwaste.org, is responsible for developing and implementing a Countywide Integrated Waste Management Plan. It manages a long-range program for development of solid waste facilities and offers many programs in the areas of source reduction and recycling, market development, technical assistance, and public education. Funding is provided by per-ton disposal and waste import mitigation fees (Stopwaste 2023).

Regulatory Framework

State Regulations

California Urban Water Management Planning Act

Under the California Water Code and Urban Water Management Planning Act of 1983, all California urban water suppliers are required to prepare and adopt an Urban Water Management Plan (UWMP) every five years, which promotes water conservation and efficiency measures. Urban water suppliers that serve more than 3,000 customers or are supplying more than 3,000 acre-feet of water annually are subject to this Act. This Act requires that the total project water use be compared to water supply sources over the next 20 years in five-year increments. Planning must occur for all drought years and must include a water recycling analysis that incorporates a description of the wastewater collection and treatment system, outlining existing and potential recycled water uses. In September 2014, the Act was amended by SB 1420, which now requires urban water suppliers to provide descriptions of their water demand management measures and similar information.

Water Conservation Act of 2009

The Water Conservation Act of 2009 (SB X7-7) requires all water suppliers to increase water use efficiency by reducing per capita urban water use by 20 percent by December 31, 2020. This bill also set a goal for the state of reducing per capita water use by at least 10 percent by December 31, 2015.

California Integrated Waste Management Act (AB 939)

AB 939 established the California Integrated Waste Management Board under CalRecycle, which required all counties within California to prepare integrated waste management plans. Additionally, it changed the focus of solid waste management from landfill to diversion strategies (e.g., source reduction, recycling, and composting), and required all municipalities to

divert 25 percent of their solid waste from landfill disposal by January 1, 1995, and 5 percent by the year 2000.

California Mandatory Commercial Recycling Law (AB 341)

AB 341 was enacted to help meet California's recycling goal of 75 percent by the year 2020. AB 341 requires all commercial businesses and public entities that generate four cubic yards or more of waste per week to have a recycling program in place. In addition, multi-family apartments with five or more units are also required to form a recycling program. In addition, each local government jurisdiction will implement a commercial solid waste recycling program that consists of education, outreach and monitoring of businesses, designed to divert commercial solid waste from businesses. Each jurisdiction will report the progress achieved in implementing its commercial recycling program, including education, outreach and monitoring, and if applicable, enforcement efforts and exemptions, by providing updates in its electronic annual report. CalRecycle will review each jurisdiction's commercial recycling program that consists of education, outreach and monitoring.

Mandatory Organics Recycling AB 1826

In October 2014, Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

CALGreen Building Code

CALGreen requires mandatory green standards that all buildings in California must abide by, including: reducing indoor water use, reducing wastewater, recycling and/or salvaging nonhazardous construction and demolition debris, and providing readily accessible areas for recycling by the occupant. The code includes different categories such as energy, water, material, and resource efficiency. These standards include a mandatory set of minimum guidelines, as well as more stringent voluntary measures for new construction projects that local communities can opt into.

Local Regulations

2015 Urban Water Management Plan (UWMP)

The DSRSD adopted a UWMP in 2016 as per SB X7-7 and the Urban Water Management Planning Act (Section 10610 of Division 6 of the California Water Code). These plans are prepared every five years and must address the reliability of water sources within the following 20 years as well as other demand management measures and water shortage contingency

plans. Additionally, the UWMP identifies strategies to meet requirements under SB X7-7 by reporting on progress towards meeting a 20 percent reduction for per-capita urban water use by the year 2020. The UWMP also plans for emergencies and times of water shortage. DSRSD is currently in the process of updating the UWMP.

Dublin Municipal Code 7.30.060:

The City of Dublin requires all construction and demolition (C&D) projects recycle at least 65 percent of the waste for remodels or tenant improvements, and 75 percent of the waste for new construction generated on a job site, excluding asphalt and concrete debris, of which 100 percent must be recycled.

City of Dublin General Plan

Chapter 4.0, Land Use and Circulation: Schools, Public Lands, and Utilities Element, identifies the City's policies related to the provision of public services and utilities in the City. The following policies from the City of Dublin General Plan relate to the proposed project:

- **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.
- **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.
- **Implementing Policy 4.6.1.B.1.** Consider obtaining water service from the East Bay Municipal Utility District and other sources.

Project Impacts and Mitigation Measures

(a) Require relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities (Less Than Significant Impact)

During project construction, potable and non-potable water, energy and possibly stormwater drains would be needed for a short-term and temporary period of time. This use would be minimal and would not require the relocation of existing, construction of new, or expansion of utility facilities. DSRSD prohibits the use of potable water for dust-control and construction grading and requires that recycled water be used (DSRSD 2023b). Therefore, project construction would only utilize a small amount of potable water for drinking, onsite sanitary needs and cement mixing.

Construction of the Project would not generate wastewater that requires treatment, and therefore would not result in wastewater discharges. Gas, diesel, and battery powered equipment and vehicles would be utilized during construction. The use of these energy sources would be minimal as discussed in Section 13, Energy. Electrical power would not be required. As discussed in Section 9, Hydrology and Water Quality, a SWPPP and BMPs shall be implemented in order to eliminate or reduce non-stormwater discharges to storm sewer systems per SWRCB statewide stormwater general permit for construction activity. Therefore, there would not be a substantial impact to stormwater drainages necessitating the construction of new or expanded stormwater facilities. For these reasons, there would be a **less than significant impact** during construction activities.

The Project site is served by existing utilities infrastructure. The Project would either utilize existing utility infrastructure or make upgrades to infrastructure, as specified in the proceeding paragraphs in this section. Operation of the proposed Project would require water, wastewater treatment, drainage facilities, electricity, and telecommunication. The site is zoned as M-1 – (Light Industrial) and Planned Development (PD) by the City and the site would continue to be used for R&D and industrial purposes.

Existing sanitary sewer lines would be removed and new sanitary sewer lines from the proposed building would be implemented, which would connect to an existing sanitary sewer manhole in the northeast portion of the site near Dublin Boulevard. The new sanitary sewer lines installed within the Project site would be constructed in conformance with City and DSRSD standards, and their construction would not cause significant environmental effects. Existing water lines would be removed and replaced with new water lines, including irrigation lines, that would connect to existing and proposed water meters in the north portion of the site and existing public water main at the northeast portion of the site near Dublin Boulevard. Fire service lines connecting the fire hydrants to water would be implemented around the proposed building and connect to a water main at the northwest portion of the site near Dublin Boulevard. The proposed fire hydrants onsite would tie into these water lines. The proposed Project would not require the construction of new water treatment facilities, or the expansion of existing facilities, other than those already planned as part of the UWMP.

The proposed storm water drainage system on the Project site would be composed of catch basins and storm drains throughout the Project site, which would connect and convey storm water to proposed bioretention areas on the Project site and existing and proposed stormwater pipelines. New storm drains line would connect to a new storm drain manhole at the northeast corner of the Project site. Stormwater would be treated onsite via five bioretention treatment planter areas that would be implemented in the western corner, southeast corner and south and northeast portion of the site.

The site would be graded to have water flow into these biorientation basins. Approximately 9,819 square feet of bioretention areas on the Project site would be used for stormwater control. The bioretention areas would provide appropriate vegetation and water quality treatment to prevent discharge of untreated storm water from the Project site. In addition, on-site drainage systems would be designed to be consistent with the Alameda County NPDES C.3 requirements for Low Impact Development (LID).

The proposed Project would include connections to the existing electricity and telecommunication lines. These connections would be conducted in accordance with each PG&E specifications, telecommunication companies and accordance with City guidelines. No natural gas lines would be provided or used at the Project site.

While the square footage of uses at the site would increase from approximately 62,715 square feet under existing conditions to 125,304 square feet, the proposed Project would result in a net reduction in energy consumption, primarily related to improved building energy standards and eliminating natural gas infrastructure as described in the Focused EIR Energy impact a. Similarly, demand for other utilities such as water are expected to decrease from existing conditions due to increased efficiencies of the building and other site improvements.

Therefore, the Project would not require the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities that could cause an environmental effect. Thus, there would be a **less than significant impact**.

(b) Sufficient water supply (Less Than Significant Impact)

As discussed in Impact a above, the Project would utilize recycled water for construction activities and a minimal amount of potable water for drinking, onsite sanitary needs, and cement mixing. Water use during construction would be temporary and for a short-term period of time and would be hauled to the site. Therefore, there would be **no impact** on water supply during project construction.

The Project would connect to existing water mains that are serviced by the DSRSD. There are existing water uses at the site. While the proposed building would be doubling in size from the existing building, it is expected that water use would decrease from existing use because of increased water-efficiencies at the site. Some efficiencies include low flow toilets and faucets and water-efficient irrigation systems with rain sensors. Additionally, since the proposed building would be brand new, there are expected to be little to no leaks. The Project would also utilize drought tolerant plants that have low water requirements once established. Therefore, water use at the site is expected to decrease from exiting levels.

The 2020 UWMP predicts total water demand of 11,993 acre-feet per year (AFY) for Zone 7 water and 3,044 AFY for recycled water in 2025, and 13,820 AFY for Zone 7 Water and 3,044 AFY for recycled water in 2040. DSRSD projected supply is 15,037 AFY in the year 2025 (West Yost 2021). Since the water demand from the proposed Project is expected to decrease from existing levels, DSRSD would have enough water supply to serve the Project site. Additionally, consistent with the DSRSD District Code, the project applicant would be required obtain a certificate of capacity rights from DSRSD, prior to issuance of a building permit. The certificate of capacity rights, which is part of the entitlement review process, ensures the DSRSD can adequately serve the proposed project. With the projects and programs implemented by DSRSD and Zone 7, water supplies are projected to meet demands.

Furthermore, the proposed Project would be consistent with the type and intensity of development assumed for the Project site in in the City's Dublin Village Historic Area Specific Plan and accounted for in the UWMP. As stated in the UWMP, DSRSD can meet its water

demand under multiple dry years with diversified supply and conservation measures (West Yost 2021). In addition, sustained water use efficiency following 2012-2016 drought and subsequent legislation related to water conservation have lowered water supply demand (Brown and Caldwell 2021). Therefore, for all of the reasons described above, the proposed Project would have **less than significant impact**.

(c) Sufficient wastewater capacity (Less Than Significant Impact)

Wastewater generated by the Project would be treated at DSRSD's Regional Wastewater Treatment Facility. As discussed in the Environmental Setting section, the wastewater treatment facility has a capacity of approximately 17.0 MGD. During project construction, there would be no wastewater generated that would require treatment at wastewater treatment facility. During project operation, similar to water use estimated in Impact (b), it is assumed that the Project would generate less waste water than existing conditions with the upgraded and improved utilities utilized in the facility. Furthermore, the Project would generate a nominal amount of wastewater compared to the capacity at the wastewater treatment facility. The Project, in combination with other development projects in the City, would not contribute to cumulatively considerable impact since it would not increase the amount of existing wastewater that is being generated. Furthermore, the Project would be consistent with the type and intensity of development assumed for the Project site in the Dublin Village Historic Area Specific Plan and accounted for in DSRSD's Wastewater Collection System Master Plan. Therefore, there would be a **less than significant impact**.

(d-e) Adequate landfill and compliance (Less Than Significant Impact)

The Altamont Landfill would serve the Project site. During project construction, the Project would generate solid waste from demolition of the existing building, pavement, and concrete. The Project applicant and its contractor(s) would comply with the City's Municipal Code 7.30.060, which requires that at least 75 percent of all C&D waste for new construction generated on a job site and 100 percent of asphalt and concrete debris to be recycled. Since the majority of waste would be recycled, project construction would result in a **less than significant impact** related to landfill capacity.

Operation of the proposed Project is not anticipated to generate a significant amount of solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. The Project would be consistent with the type and intensity of development assumed for the Project site. The number of future employees that would produce solid waste would be similar to existing conditions as discussed in Section 13, Population and Housing. However, the waste generated may be slightly more than existing waste production associated based on the increased size of the proposed building. Nonetheless, as part of the approval process and issuance of building permits, the applicant shall demonstrate that capacity will exist in solid waste disposal facilities for their Project prior to the issuance of building permits per City's General Plan Policy 4.4.1.B.3. Furthermore, the Project would be consistent with the type and intensity of development assumed for the Project site in the Dublin Village Historic Area Specific Plan and accounted for regarding waste generation to the landfill. Thus, it is expected that the Project

would be accommodated by the Altamont Landfill, which is expected to have adequate capacity to accommodate.

The Project would not conflict or interfere with the City's ability to implement its adopted solid waste management programs and policies, such as those defined in the General Plan and City's Municipal Code 7.30.060. The Project would not conflict with any of the State regulations regarding solid waste such as AB 1826, AB 341, and AB 939. Waste collection services for the proposed Project would be provided weekly by AVI. The Project would be subject to existing requirements regarding recycling and waste disposal. Since waste disposal in the City complies with State requirements, the proposed Project would not violate any State regulations relate to solid waste. Thus, the Project's impacts would be **less than significant**.

Source(s)

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Wildfire

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
18.	**WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:**				
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

Environmental Setting

Fire hazard severity zones are measured qualitatively, based on vegetation, topography, weather, crown fire potential (a fire's tendency to burn upward into trees and tall brush), and ember production and movement within the area in question. The most significant weather factor in Alameda County, including the Project site, is wind. Wind patterns are predominately west to east during fire season due to the cooler marine air flowing from the San Francisco Bay into the Livermore and San Joaquin valleys (CAL FIRE 2022a). Steep, inaccessible slopes and brush create a high fire hazard in the western hills of the City (City of Dublin 2022). Additionally, areas within the Extended Planning Areas that are adjacent to open space are susceptible to fire hazards (City of Dublin 2022).

Fire prevention areas considered to be under state jurisdiction are referred to as "state responsibility areas" or SRAs, and CAL FIRE is responsible for vegetation fires within SRA lands.[8] In general, SRA lands contain trees producing, or capable of producing, forest products; timber,

[8] California Public Resources Code (PRC) Sections 4125–4127 define a State Responsibility Area as lands in which the financial responsibility for preventing and suppressing wildland fire resides with the State of California.

brush, undergrowth, and grass, whether of commercial value or not, that provide watershed protection for irrigation or for domestic or industrial use; or lands in areas that are principally used, or are useful for, range or forage purposes.

PRC Sections 4201–4204 and Government Code Sections 51175–51189 require identification of fire hazard severity zones within the State of California. In SRAs, CAL FIRE is required to delineate three wildfire hazard ranges: moderate, high, and very high.[9] The Project site is not within a SRA. The nearest SRA extends north and south of Interstate 580 approximately 0.7 mile west of the Project site. This portion of the SRA is identified as a moderate fire hazard severity zone (CAL FIRE 2022b, 2023a). This SRA is served by Battalion 4 of CAL FIRE's Santa Clara Unit (CAL FIRE 2022a).

CAL FIRE identifies only very high fire hazard severity zones in "local responsibility areas," (LRAs) which are areas under the jurisdiction of local entities (e.g., cities and counties). The Project site is within a LRA, and the Alameda County Fire Department provides fire protection services to the Project site. There are no very high fire hazard severity zones within or in the vicinity of the Project site (CAL FIRE 2008, 2023b). The nearest very high fire hazard severity zone is located east of the City of Pleasanton, east of Interstate 680, approximately 3.5 miles south of the Project site.

Regulatory Framework

Federal Regulation

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association (NFPA) codes, standards, recommended practices, and guides ("National Fire Protection Association Documents") are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. National Fire Protection Association standards are recommended guidelines and nationally accepted good practices in fire protection but are not law or "codes" unless adopted as such or referenced as such by the CFC or a local fire agency.

State Regulations

California Fire Code

The CFC is Chapter 9 of Title 24 of the CCR. It was created by the California Building Standards Commission and is based on the International Fire Code created by the International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health

[9] CAL FIRE has developed a Fire and Resource Assessment Program (FRAP) that uses a series of computer models to assess fire hazard. FRAP's data collection and models provide detailed analysis and mapping of fuels, fire weather, historical fire occurrences, and ignition location and frequency, all of which they have analyzed and modeled to develop fire hazard severity rankings for lands throughout California.

and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazards classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

California Public Resources Code

Section 4427

PRC Section 4427 limits the use of any motor, engine, boiler, stationary equipment, welding equipment, cutting torches, tarpots, or grinding devices from which a spark, fire, or flame may originate, when the equipment is located on or near land covered by forest, brush, or grass. Before such equipment may be used, all flammable material, including snags, must be cleared away from the area around such operation for a distance of 10 feet. A serviceable round point shovel with an overall length of not less than 46 inches and a backpack pump water-type fire extinguisher, fully equipped and ready for use, must be maintained in the immediate area during the operation.

Section 4431

PRC Section 4431 requires users of gasoline-fueled internal combustion–powered equipment operating within 25 feet of flammable material on or near land covered by forest, brush, or grass to have a tool for firefighting purposes at the immediate location of use. This requirement is limited to periods when burn permits are necessary. Under Section 4431, the Director of Forestry and Fire Protection specifies the type and size of fire extinguisher necessary to provide at least a minimum assurance of controlling fire caused by use of portable power tools during various climatic and fuel conditions.

Section 4442

PRC Section 4442 prohibits the use of internal combustion engines running on hydrocarbon fuels on any land covered by forest, brush, or grass unless the engine is equipped with a spark arrestor and is constructed, equipped, and maintained in good working order when traveling on any such land.[10]

[10] A spark arrester is a device constructed of nonflammable materials specifically for the purpose of removing and retaining carbon and other flammable particles larger than 0.0232 inch from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the U.S. Forest Service.

Local Regulations

City of Dublin General Plan

Section 8.3.2 of the General Plan outlines policies and programs related to wildfire (City of Dublin 2022). The following policies related to hazardous materials are applicable to the proposed Project:

- **Guiding Policy 8.3.2.1.A.1.** Require special precautions against fire as a condition of development approval in the western hills and elsewhere in the Extended planning Areas where proposed development would interface with open space.

City of Dublin Wildfire Management Plan

The City of Dublin has adopted a Wildfire Management Plan to reduce the risk of open land wildfire to the lowest practical level consistent with reasonable protection of wildlife habitat and other open space values. The Wildfire Management Plan is implemented in conjunction with Chapter 7.32 of the City of Dublin Municipal Code, "Materials and Construction Methods for Exterior Wildfire Exposure," which provides for acceptable methods of compliance inspection and documentation for vegetation management. The Wildfire Management Plan requires compliance with State defensible space guidelines and brush control in designated wildland-urban interface fire areas.

Project Impacts and Mitigation Measures

As stated above, Appendix G of the CEQA Guidelines determines wildfire impacts based on whether a proposed project would occur within or near a SRA or on lands classified as very high fire hazard severity zones. The Project site is not within a SRA or very high fire hazard severity zone. However, the area approximately 0.7 mile to the west is within a SRA and designated by CAL FIRE as a moderate fire hazard severity zone (CAL FIRE 2008, 2022b, 2023a, 3b).

(a) Impair an emergency response plan (No Impact)

As discussed in Section 8, "Hazards and Hazardous Materials" (Impact f), the existing ingress and egress from Dublin Boulevard to the Project site would be maintained. All construction materials would be staged on-site, and therefore no temporary lane closures along Dublin Boulevard would be required during Project construction that could impede emergency access or hinder emergency evacuation. For Project operation, planned emergency access throughout the Project site would be reviewed by the City of Dublin Building Department and the Fire Department to ensure that appropriate widths and turning radii area provided for emergency vehicles. Thus, Project construction and operation would result in **no impact** from impairment of emergency response or evacuation plans.

(b) Exposure to wildfire (Less Than Significant Impact)

The Project would not substantially alter site slopes or vegetation or introduce new land uses that would exacerbate potential wildfire risks at the site. The Project would involve demolishing the existing industrial facility and constructing a new building in its place. The Project contractor would be required to comply with applicable provisions of the California Fire Code and

regulations related to fire safety and wildfire suppression identified above in the Regulatory Framework section, including the following requirements from the California PRC:

- PRC Section 4428, which identifies additional firefighting equipment requirements during the period of highest fire danger (April 1–December 1);
- PRC Section 4431, which prohibits the use of portable tools powered by gasoline-fueled internal combustion engines within 25 feet of flammable materials when burning permits are required; and
- PRC Section 4442, which requires engines be equipped with a spark arrestor.

Strict adherence to applicable PRCs requirements would ensure that wildfire risks are minimized during construction.

The proposed building would comply with state and local regulations related to fire safety such as the CFC and the City building code requirements. Internal sprinkler systems, fire access man doors, fire hose, and fire resistant materials will be implemented. No highly flammable and combustible material shall be used or stored in the building. Driveways on the Project site would be connected by a 30 to 35-foot-wide fire access route around the perimeter of the proposed building. A total of six fire hydrants would be installed along this fire access road. The road would be designed to accommodate emergency response vehicles (i.e., fire trucks). A 26-foot-wide fire access route along the northern side of the building would allow for aerial apparatus access. A fire service line would connect to a public water line, which would provide water to the fire hydrants located around the site. These site improvements would reduce the risk of fire spreading offsite. Therefore, the Project would not exacerbate potential wildfire risks at the Project site, and this impact would be **less than significant**.

(c) Require installation or maintenance of infrastructure (No Impact)

The Project does not include infrastructure that would exacerbate fire risks, as all proposed utility connections would be developed within previously developed areas of the site away from large areas of vegetation. No new public roadways are proposed and the existing ingress and egress from Dublin Boulevard to the Project site would be maintained. While electric equipment would be removed and replaced with new equipment, it would be done so according to PG&E specifications adhere to local and State regulations, which would be reviewed by the City. Adherence to regulations would minimize any increase fire risks. For these reasons, the installation or maintenance of infrastructure associated with the Project would not exacerbate fire risk, and **no impact** would occur.

(d) Exposure to flooding or landslides (No Impact)

As discussed previously, the Project site is not within a State Responsibility Area or Very High Fire Hazard Severity Zones (VHFHSZ); however, the area approximately 0.7 mile to the west is within a SRA and designated by CAL FIRE as a moderate fire hazard severity zone (CAL FIRE 2023a, 2023b). There are no areas on or nearby the Project site that have recently had fires that would result in post-fire slope instability.

As discussed in Section 8, “Hydrology and Water Quality,” the proposed on-site stormwater drainage system would be sufficient to detain and treat operational stormwater runoff

generated by the proposed Project, and would not result in upstream or downstream flooding (see Question c for further discussion of drainage impacts). Project-related construction would not be performed in, and no new development would be located in, the 100-year floodplain. In addition, the Project site north of Dublin Creek has been previously graded to accommodate the existing building and parking lots and is nearly flat. The elevation slopes gently from approximately 388 feet in the west to 384 feet in the southeast and 380 feet in the northeast. The Project site itself is not located in an Earthquake Zone of Required Investigation for landslides (see Question a(iv), in Section 6, "Geology and Soils," for further discussion of landslide potential). Therefore, the Project would not result in significant risks related to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes, and **no impact** would occur.

Source(s)

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Mandatory Findings of Significance

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)	X			
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

(a) Significant Impacts to Biological Resources or Important Examples of History or Prehistory

The Project could result in potentially significant impacts to biological, geology and soils (paleontological), cultural resources, and tribal cultural resources.

Biological resources and paleontological resources would result in a less than significant impact with mitigation and are further described in the Focused EIR.

Related to California history or prehistory and cultural resources, this Initial Study has identified that the proposed project would have potentially significant impacts to cultural and tribal cultural resources, as discussed above in Sections 5 and 18 respectively, due to the proposed demolition of a potentially historic resource (the existing Hexcel building) and due to the high potential for archaeological resources and possibly human burials to underlie the Project site. Therefore, impacts to cultural and tribal cultural resources are analyzed in a Focused EIR.

(b) Cumulative Impacts

Consideration of past, present, and reasonably foreseeable projects in the Project area and vicinity indicate that, with the exception of cultural and tribal cultural resources (which are analyzed in an EIR), impacts from implementation of the Project would not combine with

impacts from other projects to cause a significant cumulative impact and would not make a considerable contribution to a significant cumulative impact.

The Project would not have impacts to agriculture or forestry resources, land use and planning, mineral resources, population and housing, public services, or recreational resources that would combine with other projects. Cumulative impacts with respect to aesthetics, biological resources, energy, geology, hazardous and hazardous materials, noise, hydrology and water quality, transportation, utilities and service systems, and wildfire would be less than significant. However, such impacts would be limited to the Project area and, where necessary, mitigated such that they would not substantially combine with other off-site impacts. Transportation, air quality and GHG emissions could extend beyond the Project area to potentially combine with impacts from other projects. However, the Project would decrease traffic from existing levels. Cumulative impacts of the Project with other reasonably foreseeable projects and development in relation to transportation have been taken into consideration in Section 16, Transportation (see also Appendix E). For GHG emissions, the BAAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable in developing its CEQA significance thresholds. The BAAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. As discussed in Sections 3 and 7, the Project's emissions would be below the BAAQMD cumulatively considerable thresholds.

Cumulative impacts of the Project for air quality, biological resources, cultural resources, energy, hazardous materials, geology and soils (paleontological resources) and tribal resources are further discussed in the Focused EIR.

(c) Substantial Adverse Effects on Human Beings

As described within this Initial Study, environmental impacts (including those that may have a direct or indirect adverse effect on humans [i.e., air quality, noise, hazardous materials]) that are associated with the proposed project would be either less than significant or could be reduced to less than significant through implementation of project-specific mitigation measures recommended in this document. Hazardous and hazardous materials and air quality emissions could have an impact on human beings and are described in more detail in the Focused EIR. No other adverse effects on human beings from the Project are anticipated.

Source(s)

None.

Figures

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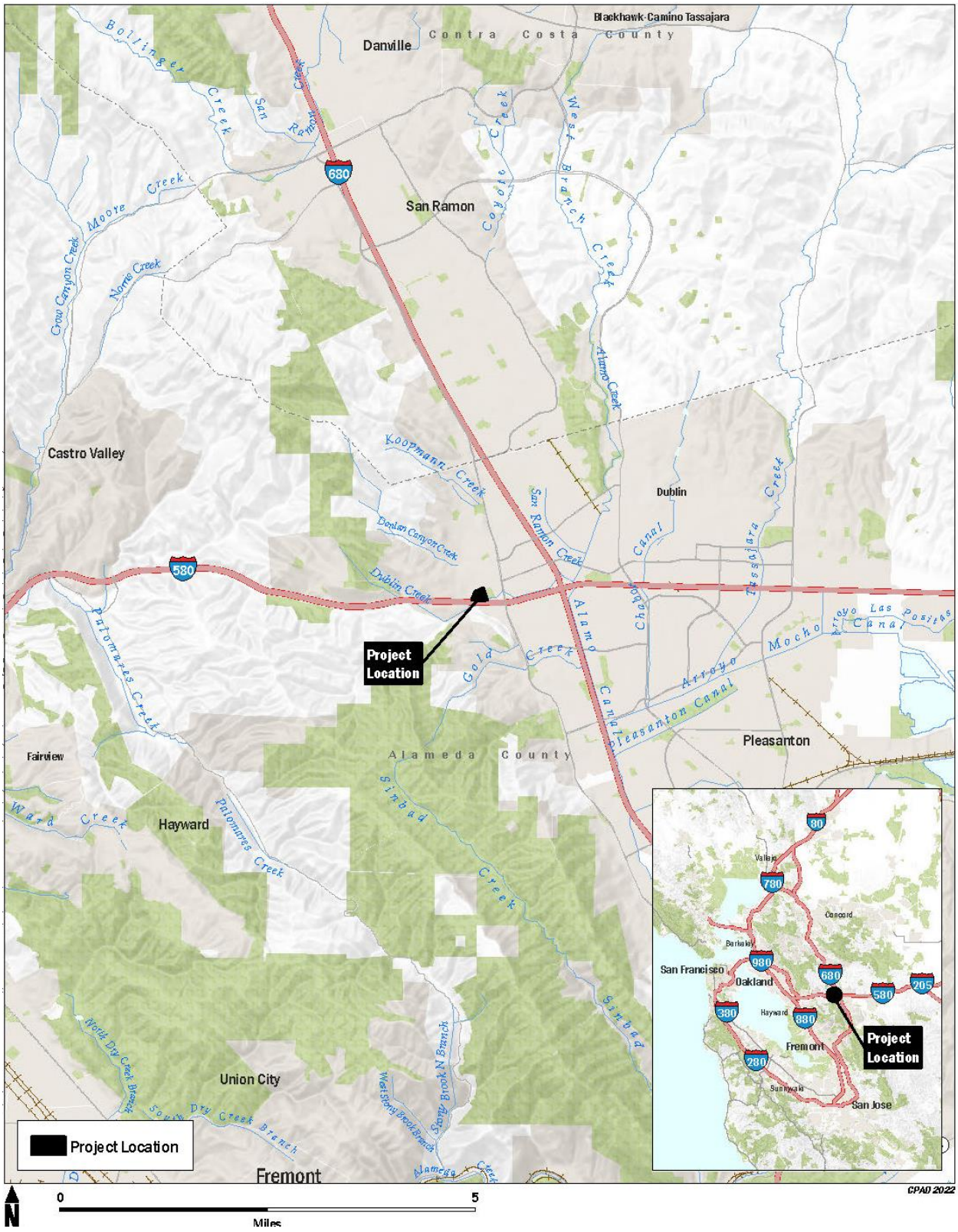

Figure 1. Project Location

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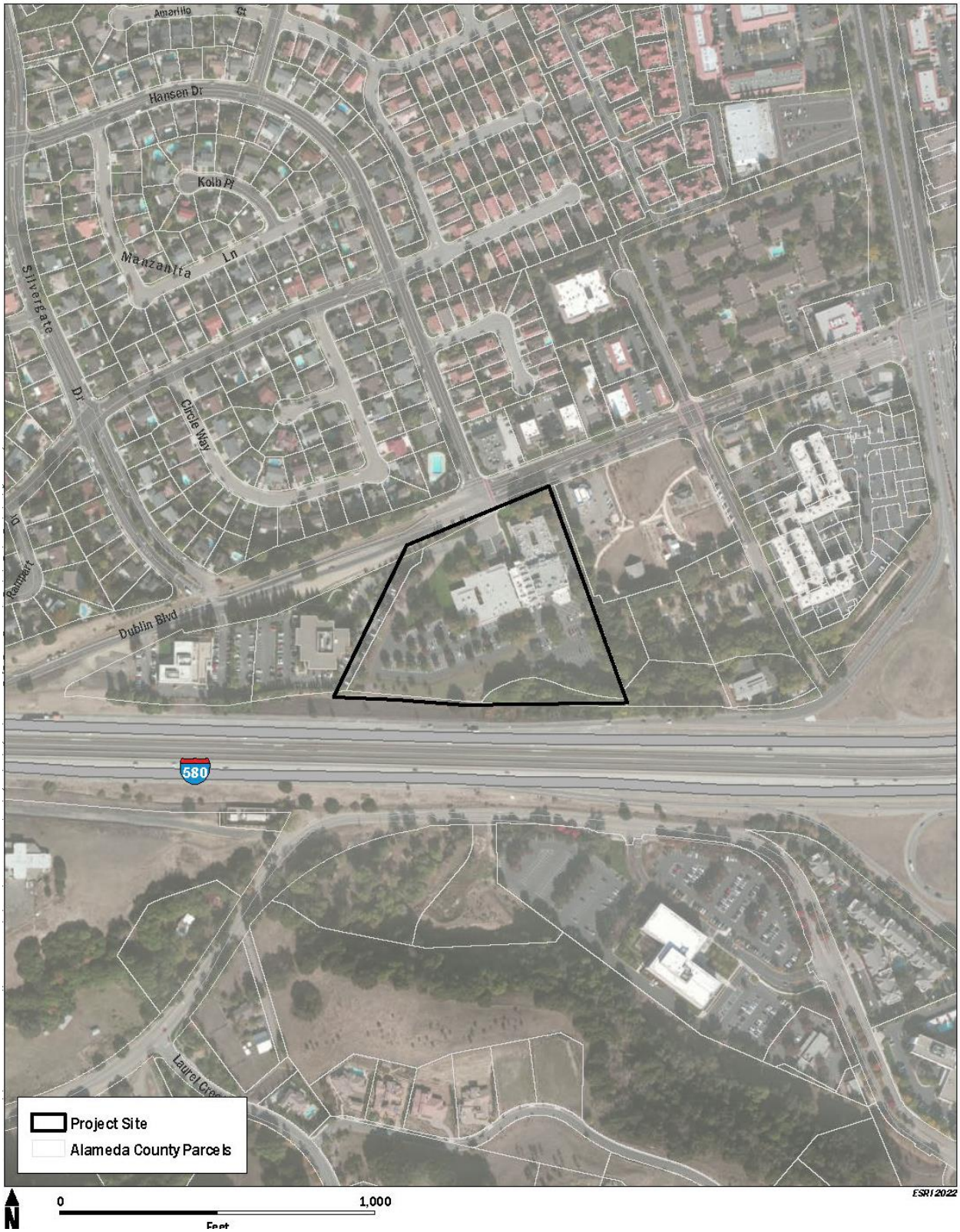

Figure 2. Project Site

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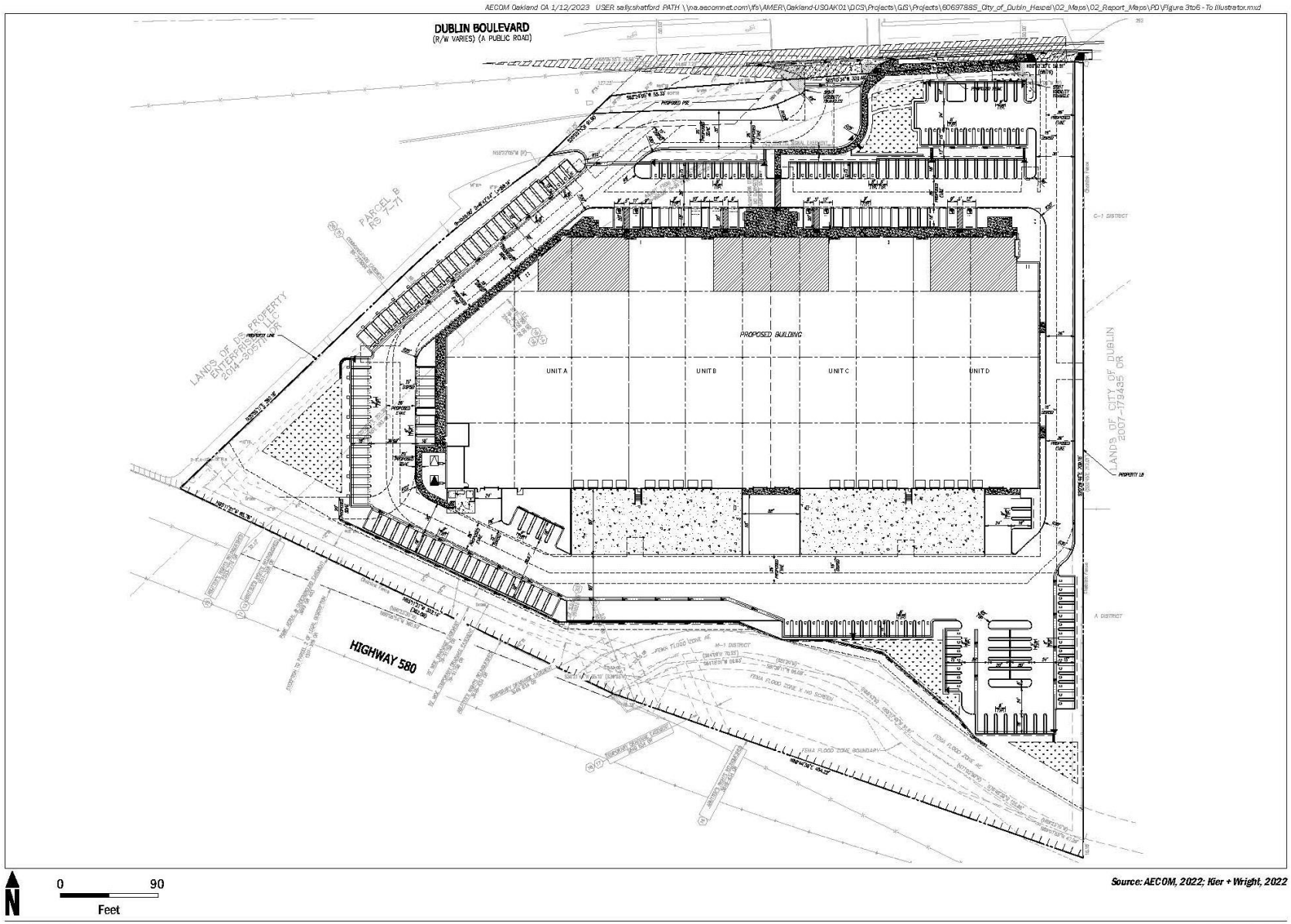

Figure 3. Site Plan

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Figure 4. Elevations

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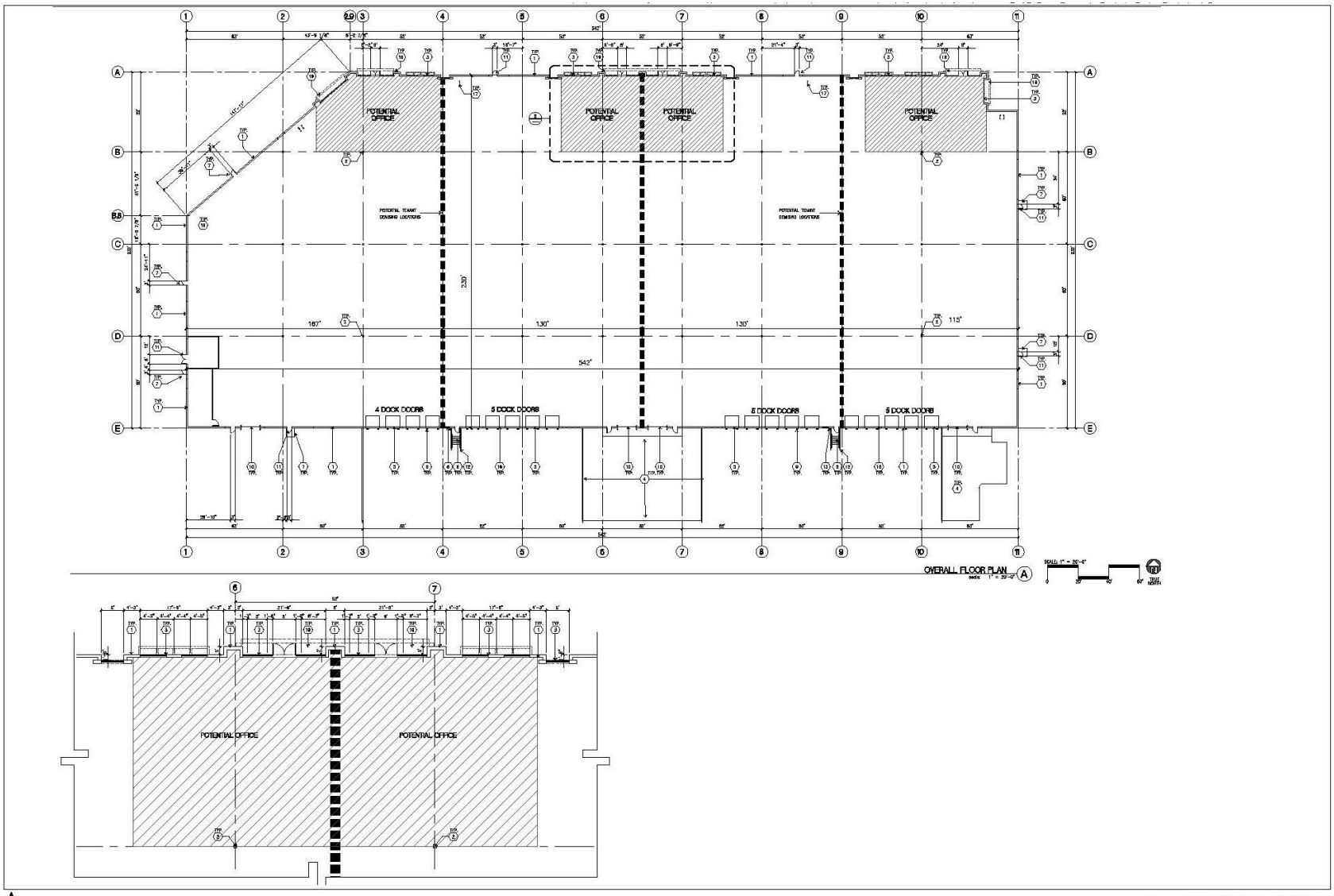

Figure 5. Overall Floor Plan

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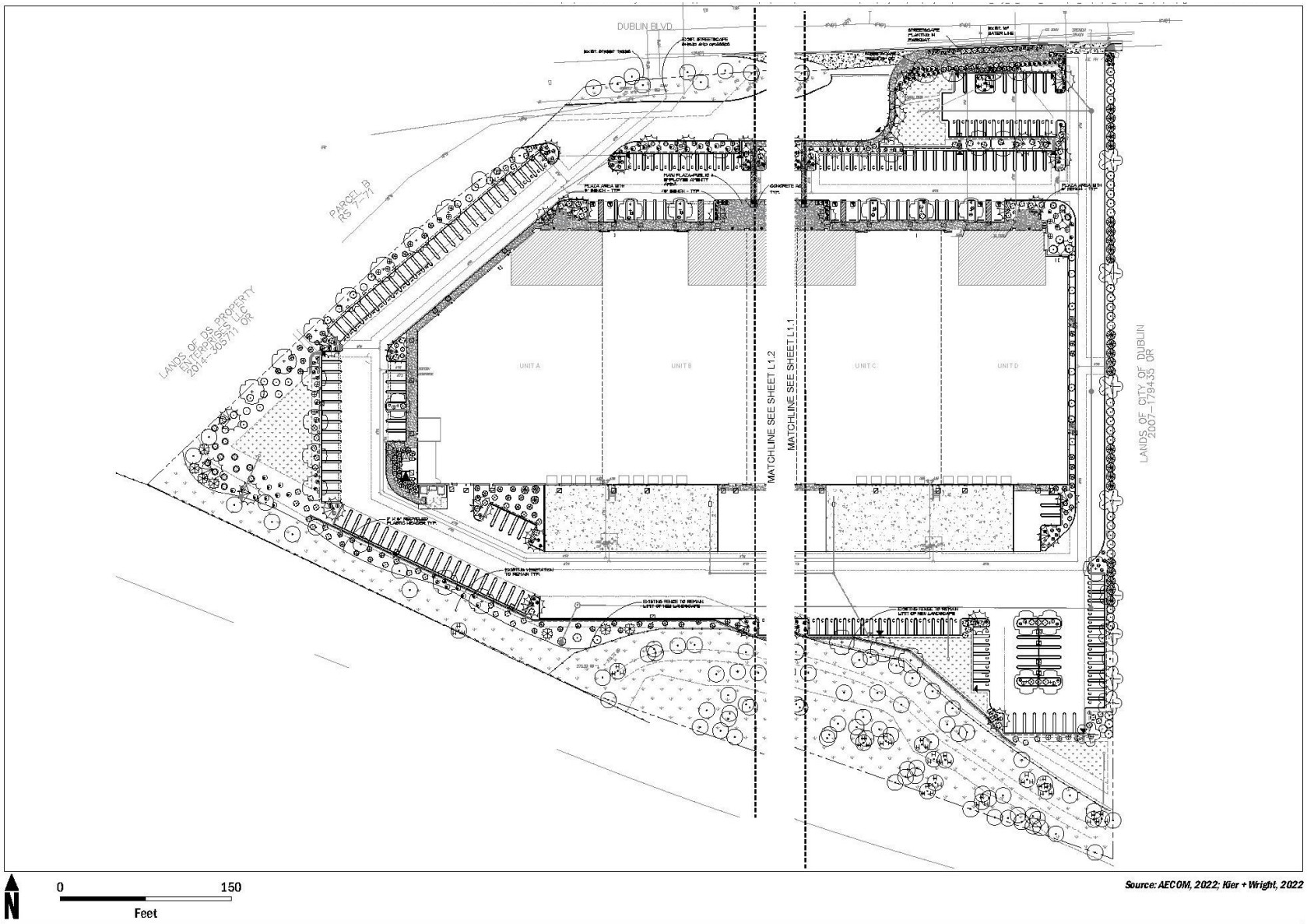

Figure 6A. Landscape Plan

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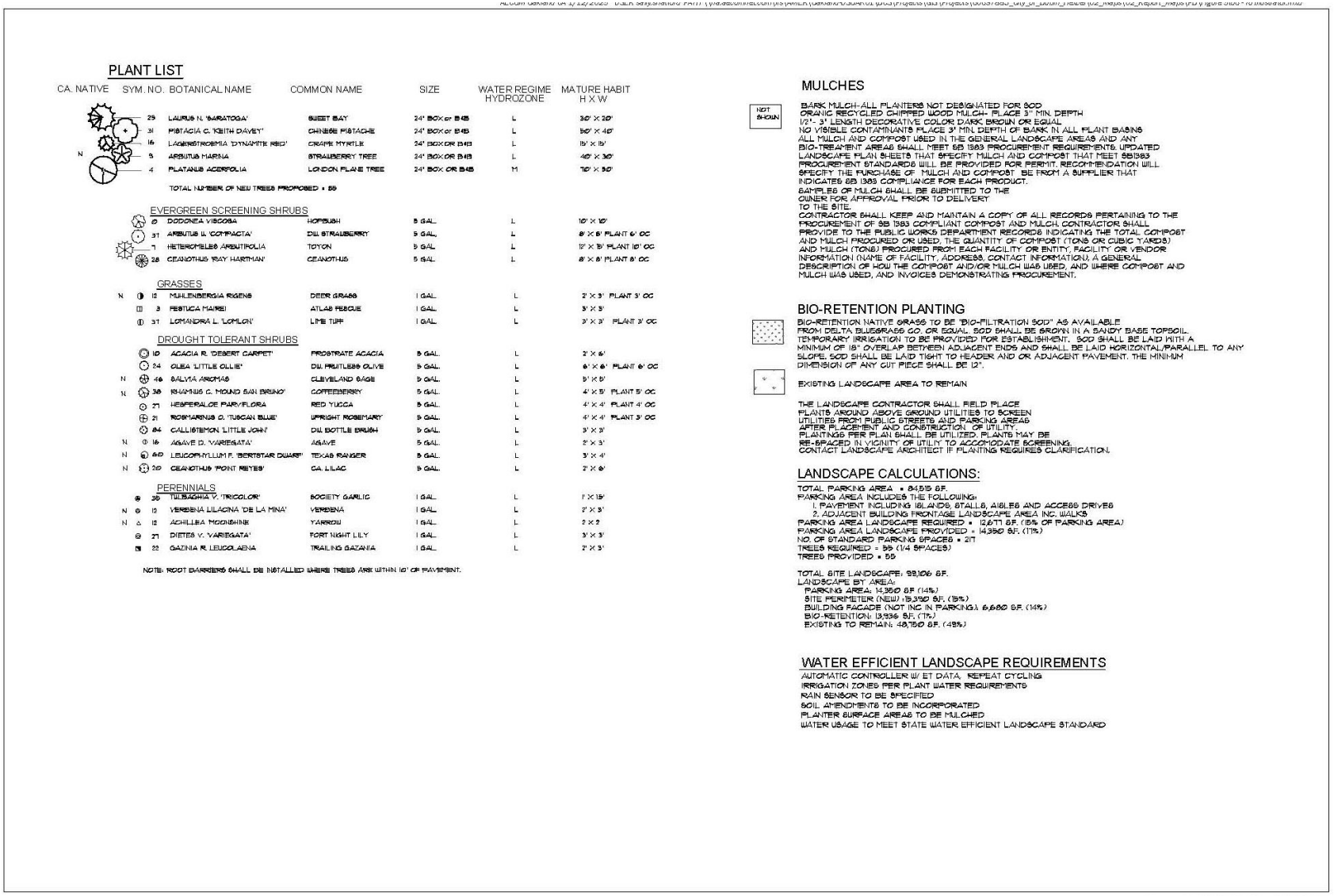

Source: AECOM, 2022; Kier + Wright, 2022

Figure 6B. Landscape Plan Details

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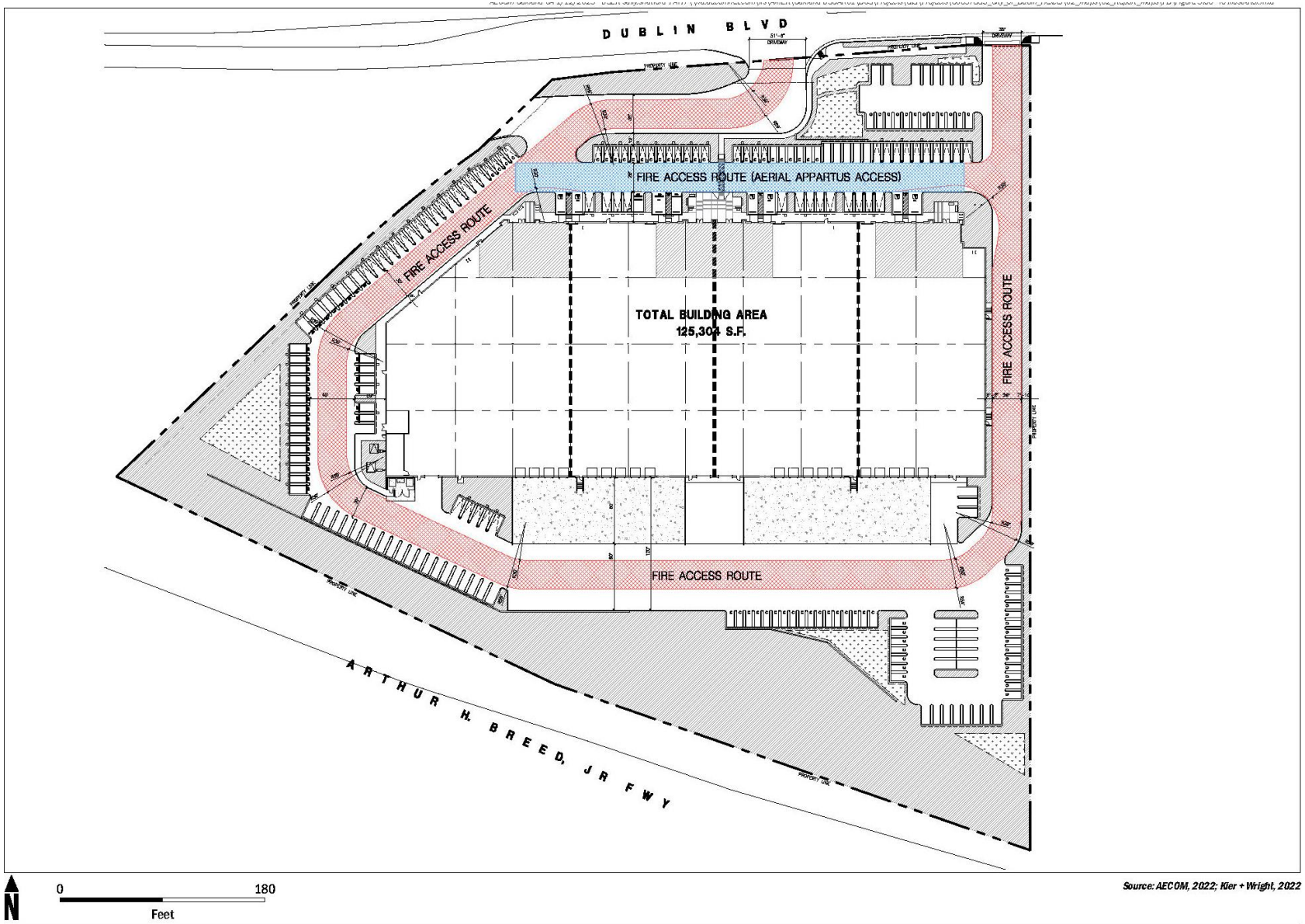

Figure 7. Fire Access Route

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Figure 8. Proposed Project Area, Noise Monitoring Locations and Worst-Case Noise-Sensitive Receptors

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Figure 9. Distribution of Modeled Noise Sources Assumed for Project Operations

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Source: AECOM, 2022; Kier + Wright, 2022

Figure 10. Perspective 1

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Source: AECOM, 2022; Kier + Wright, 2022

Figure 11. Perspective 2

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Appendix B: Notice of Preparation and Scoping Comments

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DUBLIN
CALIFORNIA

Notice of Preparation of an Environmental Impact Report

Date	May 15, 2023
To	Responsible and Trustee Agencies *(see Distribution List, attached)* Office of Planning and Research
Project Title	**Hexcel Redevelopment Project**
Project Application Number	PLPA-2022-00038
Project Location	The project site is located at 11711 Dublin Boulevard (APN# 941-1560-009-01 and 941-1560-003-04) in the City of Dublin, CA.
Project Applicant	Dublin Boulevard Owner, LP
Contact – For questions or submitting comments.	Gaspare Annibale Associate Planner City of Dublin Community Development Department 100 Civic Plaza Dublin, CA 94568 Phone: 925/833-6610 Gaspare.Annibale@dublin.ca.gov

The City of Dublin will be the Lead Agency and will prepare a focused environmental impact report (EIR) for the project identified above. We are requesting the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR when considering your permit or other approval for the project.

The purpose of an EIR is to inform decision-makers and the general public of the environmental effects of a proposed project that an agency may implement or approve. The EIR process is intended to provide information sufficient to evaluate a project and its potential for significant impacts on the environment, to examine methods of reducing adverse impacts, and to consider alternatives to the project.

According to State law, the deadline for your response to this Notice of Preparation is 30 days after receipt of this notice, on or before June 15; however, we would appreciate an earlier response, if possible. Please identify a contact person, and send your response to the contact name above.

Project Description

Dublin Boulevard Owner, LP is proposing to construct a new 125,304 square foot building on the 8.81-acre project site located at 11711 Dublin Boulevard in the City of Dublin, Alameda County, California. The project site is composed of two parcels (Assessor Parcel Numbers [APN] 941-1560-009-01 [Parcel 1] and 941-1560-003-04 [Parcel 2]) with an existing 62,715 square foot building on Parcel 1. The existing Hexcel research and development (R&D) building would be demolished and replaced with the proposed building. The proposed building would cater to future tenants in the R&D and life sciences field. Other site improvements would include landscaping; parking; a fire access road; circulation improvements for truck access and loading and unloading materials; utilities; pavement and grading to treat site drainage.

The City would require the applicant to obtain the following approvals and permits: approval of a Planned Development Rezone with a related Stage 1 and Stage 2 Development Plan; Site Development Review Permit; Heritage Tree Removal Permit; and demolition, building, grading, and encroachment permits.

CEQA Procedural Matters

1. A copy of the Initial Study is ☐ is not ☒ attached.
2. The proposed project is ☐ is not ☒ considered a project of statewide, regional, or area wide significance.
3. The proposed project will ☐ will not ☒ affect highways or other facilities under the jurisdiction of the State Department of Transportation.
4. A scoping meeting will ☒ will not ☐ be held. The scoping meeting will be held on **May 25, 2023** at **7:00 PM via Zoom: https://dublinca.zoom.us/j/82819595305?pwd=enBvczd4WDE4cFhCQ2hvQndSMWZ3QT09**.

Probable Environmental Effects

The Draft EIR for the proposed project will be prepared and processed in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended. In accordance with the requirements of CEQA, the EIR will include the following:

- A summary of the project;
- A project description;
- A description of the existing environmental setting, potential environmental impacts, and mitigation measures;
- Alternatives to the project as proposed; and
- Environmental consequences, including (a) any significant environmental effects which cannot be avoided if the project is implemented; (b) any significant irreversible and irretrievable commitments of resources; (c) the growth inducing impacts of the proposed project; (d) effects found not to be significant; and (e) cumulative impacts.

The City has prepared a draft Initial Study, and City staff have determined that the project may have potentially significant effects on the environment in several resource areas. Impacts related to the following resource topics were found to be potentially significant but could be reduced to Less than Significant with Mitigation: Air Quality, Biological Resources, Energy, Geology and Soils, and Hazards and Hazardous Materials. Due to the age and history of the building to be demolished, and the proximity of the adjacent cemetery, initial research indicates that impacts relating to Cultural Resources and Tribal Cultural Resources could be potentially significant and further analysis is required to determine if these impacts could be mitigated to a less than significant level or if they would be significant and unavoidable. In accordance with Section 15063(c)(3) of the CEQA Guidelines, the City intends to focus the EIR on Cultural Resources, Tribal Cultural Resources, and those resource topics that can be reduced to Less than Significant with Mitigation only and rely on the analysis within the Initial Study for all other environmental topics.

CITY OF DUBLIN

Gaspare Annibale

Gaspare Annibale
Associate Planner

THE CITY OF PLEASANTON

Via Email:
Gaspare.Annibale@dublin.ca.gov

June 12, 2023

Gaspare Annibale
Associate Planner
City of Dublin Community Development Department
100 Civic Plaza
Dublin, CA 94568

RE: **Hexcel Redevelopment Project/PLPA-2022-00038**

Dear Mr. Annibale:

Thank you for the Notice of Preparation of an Environmental Impact Report (EIR) for Case No. PLPA-2022-00038 dated "Received May 24, 2023" by the City of Pleasanton Planning Division (Pleasanton). The project would demolish an existing 62,715 square-foot building and construct a new 125,304 square-foot building with 217 parking stalls and related site improvements on the 8.81-acre site located at 11711 Dublin Boulevard.

Pleasanton staff reviewed the notice and information included in the notice as well as those posted on Dublin's website. The notice stated a draft Initial Study (IS) was prepared and identified a number of items that could have potential significant impacts. However, the IS was not made available for public review. And additionally, transportation was not among the listed items that could have potentially significant impacts.

Pleasanton staff would like to review the prepared IS for this project. Additionally, staff requests the review of the draft EIR when it is available. Thank you for the referral and we look forward to working with Dublin in identifying transportation impacts and mitigations. If you have any questions, I can be reached at: jsoo@cityofpleasantonca.gov

Sincerely,

Jenny Soo
Associate Planner

Electronic cc:
Mike Tassano, Traffic Engineer

COMMUNITY DEVELOPMENT
www.cityofpleasantonca.gov
P. O. BOX 520 · 200 Old Bernal Avenue
Pleasanton, CA 94566-0802

Planning	Building & Safety	Code Enforcement	Permit Center	Traffic Engineering
(925) 931-5600	(925) 931-5300	(925) 931-5620	(925) 931-5630	(925) 931-5677
Fax: 931-5483	Fax: 931-5478	Fax: 931-5478	Fax: 931-5478	Fax: 931-5487

STATE OF CALIFORNIA — Gavin Newsom, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION

RECEIVED
MAY 22 2023
CITY OF DUBLIN
BUILDING & SAFETY DIVISION

May 18, 2023

Gaspare Annibale
City of Dublin Community Development Department
100 Civic Plaza
Dublin, CA 94568

Re: 2023050372, Hexcel Redevelopment Project, Alameda County

Dear Mr. Annibale:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
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NAHC HEADQUARTERS
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West Sacramento,
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AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

cc: State Clearinghouse

ZONE 7 WATER AGENCY
Delivering Quality, Reliability and Safety

100 North Canyons Parkway
Livermore, CA 94551
(925) 454-5000

June 15, 2023

Gaspare Annibale, Associate Planner
City of Dublin
Community Development Department
100 Civic Plaza
Dublin, CA 94568

Sent by email: Gaspare.Annibale@dublin.ca.gov

Re: Notice of Preparation of a Draft Environmental Impact Report – Hexcel Redevelopment Project

Zone 7 Water Agency (Zone 7, or Zone 7 of the Alameda County Flood Control and Water Conservation District) has reviewed the referenced document in the context of Zone 7's mission to "Deliver safe, reliable, efficient, and sustainable water and flood protection services" within the Livermore-Amador Valley. Below are our comments for your consideration.

1. **Water Supply –** The EIR should clearly describe the source of potable water supply and evaluate the planned water use in the context of existing planning documents.

2. **Wells -** Our records indicate that there is one lost well (3S1W02K001) and one destroyed well (3S1W02K012) in the project area. Exact locations of wells are unknown. Please immediately notify Zone 7 if 3S1W02K001 is located or any other wells exist in the project area. If located, well 3S1W02K001 must be permitted by Zone 7 for destruction. Also, please be advised that a Zone 7 drilling permit is needed for any water well or soil boring work that may be planned for this project. The drilling permit application and permit fee schedule can be downloaded from our website: https://www.zone7water.com/post/well-drilling-and-soil-boring-permits. For additional information please email wellpermits@zone7water.com.

3. **Groundwater Basin -** Note that the subject property (or project) is located within the basin area under sustainable groundwater management by Zone 7 as per the Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin (https://www.zone7water.com/sites/main/files/file-

attachments/alt_gw_sustainability_plan-4.pdf?1656015908) and is subject to all relevant sustainable groundwater management actions.

4. **Flood Protection / Channel ownership -** The proposed project is adjacent to Dublin Creek (Line T), which is not owned or maintained by Zone 7. Zone 7 owns and maintains the section of Line T, east of San Ramon Road, which is downstream of the project. Based on real property information, the parcel owner is responsible for the reach of Dublin Creek.

5. **Flood Protection / Impervious areas -** Developments creating new impervious areas within the Livermore-Amador Valley are subject to the assessment of the Development Impact Fee for Flood Protection and Storm Water Drainage. These fees are collected for Zone 7 by the local governing agency: 1) upon approval of final map for public improvements creating new impervious areas; and/or 2) upon issuance of a building or use permit required for site improvements creating new impervious areas. Fees are dependent on whether post-project impervious area conditions are greater than pre-project conditions.

6. **Water-wise Landscaping -** Zone 7 encourages the use of sustainable, climate-appropriate, and drought-tolerant plants, trees and grasses that thrive in the Tri-Valley area. Find more information at: http://www.trivalleywaterwise.com.

We appreciate the opportunity to comment on this project. If you have any questions on this letter, please feel free to contact me at (925) 454-5005 or via email at erank@zone7water.com.

Sincerely,

Elke Rank

Elke Rank
cc: Ken Minn, file

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Appendix C: Historical Resources Evaluation

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AECOM

150 California Street, Suite 200
San Francisco, CA 94111
aecom.com

To:
Gaspare Annibale, Associate Planner, City of Dublin

From:
Heather Miller, MA, Architectural Historian, AECOM
Trina Meiser, MA, Historic Preservation Planner, AECOM
Stephanie Osby, Environmental Planner/Project Manager, AECOM

Project Name:
11711 Dublin Boulevard Historical Resouce Evaluation

Date:
May 12, 2023

FINAL Technical Memorandum – 11711 Dublin Boulevard Historical Resource Evaluation

Introduction

AECOM Technical Services, Inc. (AECOM) holds an on-call master services agreement with the City of Dublin (City) for environmental analysis services, dated July 1, 2021. The City requested AECOM to prepare a historical resource evaluation of the Hexcel Corporation's 1960s-constructed research and development facility at 11711 Dublin Boulevard. The facility was previously recorded on Department of Parks and Recreation (DPR) 523 forms and evaluated for eligibility for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) in 2003, but at that time the property was less than 50 years old and not considered a potential historical resource under CEQA. Additionally, the 2003 historic evaluation (VerPlanck 2003) did not address the four eligibility criteria for either the NRHP or the CRHR, but merely concluded that the property lacked architectural or historical significance to be eligible.

This technical memo describes the current condition of the facility with recent photographs, provides a historical context of the use of the facility and physical development of the facility over time, and evaluates the facility for eligibility for listing in the CRHR as a potential historical resource for the purposes of CEQA.

Facility Description

The Hexcel Corporation's R&D facility at 11711 Dublin Boulevard is sited at the south side of the intersection of Dublin Boulevard and Hansen Drive in Dublin. The 62,715-square foot facility is on an 8.81-acre, triangular-shaped parcel, Assessor's Parcel Number (APN): 941-1560-009-01 (see **Attachment - Location Map**). The Contemporary/Brutalist style facility has a roughly L-shaped plan and was largely constructed in two phases dating to 1962 and 1967, with small additions and alterations in the mid-1980s.

The original 1962 portion of the facility is on the east half, has a roughly rectangular plan, and is constructed of tilt-up concrete panels in a north-south orientation (**Photograph 1**). The north end of the building rests on a concrete foundation and is one story tall. The exterior is clad with scored concrete, and the flat roof parapet is lined with a louvered metal equipment screen. Primary entry into this section is through a single, aluminum-framed glass door with a fixed transom above and full-height fixed windows. The door is accessed by a low concrete ramp and is protected by a wood-frame, flat roof porch shelter enclosed with vertically oriented, narrow wood slats. A privacy screen using the same vertically

oriented, narrow wood slats lines the west side of the east half of the facility and terminates near the secondary entry, which consists of a pair of glazed, metal double doors (**Photograph 1** and **Photograph 2**). The privacy screen obscures two pairs of glass double doors and a pair of flush metal double doors.

Photograph 1: Northeast corner of building complex showing the 1962-constructed portion, facing southwest, December 16, 2022. Note this is the original 1962-constructed section of the complex.

Photograph 2: West side of original 1962-construction section of the complex and primary entry on far right, facing southeast, December 16, 2022.

A two-story building hyphen built in 1984 connects the 1962-constructed east half with the 1967-constructed west half (**Photograph 2** and **Photograph 3**). The hyphen has a flat roof and is clad with scored concrete (**Photograph 4**). Entry is gained through a pair of glazed metal doors with a transom above. A similar entry onto a second-story balcony is located directly above. Fenestration in the building hyphen consists of full-height, fixed windows with black anodized frames.

The 1967-constructed portion of the facility abuts the west side of the two-story building hyphen. This single-story building section has a T-shaped plan and an east-west orientation (**Photograph 3**). The building is characterized by a flat roof with deep eaves and fascia that is supported by repeating narrow, concrete pylons with wood sheathing on all sides (**Photograph 3** and **Photograph 5**). It includes full-height, tinted fixed windows with black anodized frames. Primary entry into this section and the main entrance to the entire facility is through a pair of glass double doors with black anodized frames on the east end of the north-facing façade (**Photograph 4**).

Photograph 3: North side of building complex, with two-story building hyphen on left, facing southeast, December 16, 2022.

Photograph 4: Detail of north side of the building complex with two-story hyphen on left. Note the recessed window near the center of the frame faces an interior courtyard (see Photographs 15 and 16), facing south, December 16, 2022.

A secondary entry is through a pair of glass double doors with black anodized frames on the east end of the south side (**Photograph 6**).

Photograph 5: Overview of west and south sides of building complex, facing northeast, December 16, 2022.

Photograph 6: Detail of entry on south side, facing north, December 16, 2022.

Like the north side of the facility, a two-story building hyphen built in 1984 connects the 1962-constructed east half of the building and the 1967-constructed west half of the building. It also features

similar entry configurations on the first- and second stories (**Photograph 7**). East of the building hyphen is the south end of the 1962 portion of the facility that is accessed by a roll up door (**Photograph 8**).

Photograph 7: Detail of entrances in two-story building hyphen on south side, facing north. Note the window at the center of the frame faces an interior courtyard (see Photograph 16).

Photograph 8: Two-story office section (on left) and overhead entry door into laboratory section (on right) on south side, facing north, December 16, 2022.

A single-story chemical storage addition, constructed in 1985, is at the southeast corner of the facility. The addition has a square plan, a flat roof, with scored panel lines in the concrete exterior (Error! Reference source not found.). Primary entry is gained through a pair of flush metal double doors on the

west side. A small, corrugated metal shed roof addition that was constructed between 1993 and 2002 is on the west side. Projecting boxed eaves are on the south and east sides above chain-link wall sections with integrated entry doors (**Photograph 10**). A single metal entry door is on the north end of the east side of the addition and protected by a cantilevered metal awning that is affixed to the addition and the 1962 portion of the facility (**Photograph 11**).

Photograph 9: Southeast corner of building complex, facing northeast, December 16, 2022. Note this section was added in 1985.

Photograph 10: Overview of south and east sides of building complex, facing northwest, December 16, 2022.

An overhead roll-up door is centrally located on the east side of the facility, and two glass double doors are in the north end of the south side, all located in the 1962 portion of the facility (**Photograph 11** and **Photograph 12**).

Photograph 11: South end of the east side of building complex, facing northwest, December 16, 2022. Note most of this side consists of the original 1962-constructed section.

Photograph 12: North end of the east side of building complex, facing south December 16, 2022. Note most of this side consists of the original 1962-constructed section.

The facility contains three open-air courtyards. The east courtyard is in the 1962 portion of the facility. It is accessed from inside the building on the north and south ends through aluminum-frame glass double doors set into fixed window surrounds (**Photograph 13** and **Photograph 14**). Ribbon windows line the entire length of the west side of the courtyard and three-quarters of the length of the east side. Two wood benches are sited on the north end of the courtyard. A variety of mature trees and shrubs are planted in the ground, including Bird of Paradise, Pygmy Palm, Foxtail Fern, Olive, Ivy, Japanese Aralia, and Oleander. Most of the courtyard is paved with concrete.

Photograph 13: Southern entry into the east courtyard, facing north, December 16, 2022.

Photograph 14: Northern entry into the east courtyard, facing northeast, December 16, 2022.

The central courtyard lines the west side of the two-story building hyphen. It was originally larger, but was encroached upon with the two-story building hyphen addition. This courtyard is visible from inside the building along two hallways that connect the 1967 building section to the 1984 building hyphen. Access into the central courtyard is on the south end through an anodized metal-frame glass door set into fixed window surrounds (**Photograph 15**). Full-height fixed windows line the north side of the central courtyard (**Photograph 16**). Plantings consist of several varieties of ferns of shrubs. A concrete walkway and repeating narrow, concrete pylons with wood sheathing line the west side of the courtyard.

Photograph 15: Southern entry into central courtyard, facing north, December 16, 2022.

Photograph 16: Northern end of central courtyard, facing south, December 16, 2022.

The west courtyard is in the 1967 portion of the facility. It is accessed from inside the building on the north end through flush double doors set into fixed window surrounds (**Photograph 17**). Offices with full-height, tinted fixed windows with black anodized frames and repeating narrow, concrete pylons with wood sheathing line the west and east sides of the courtyard (**Photograph 18**). A small water feature is sited near the center of the courtyard with a concrete pagoda. Plantings consist of several matures trees, a few shrubs, and two potted trees. Several rocks of various sizes have been placed adjacent to and north of the water feature. Dry-laid brick largely covers the courtyard floor with concrete around the perimeter.

Photograph 17: Northern entry into west courtyard, facing south, December 16, 2022.

Photograph 18: Overview of west courtyard, facing southwest, December 16, 2022.

Property Development

In October 1961, Royal Research Corporation (Royal Research), a scientific research and development enterprise, purchased 13 acres of undeveloped, agricultural-zoned land between Dublin Boulevard and Highway 50 from William T. and Alice K. Marsh. That same month Alameda County approved Royal Research's request to rezone the property into a special industrial zone to build a new research and development facility. At the time, Dublin was a small agricultural community with one school and one church, but a new 9,500-home development called San Ramon Village was underway on the north side of town. Royal Research surveyed the entire county to select a site to build their facility and chose this property because of the somewhat remote location. The company was already leasing a small office across the street at 11824 Dublin Avenue and were relying on the budding labor pool of new San Ramon Village residents (Hydro Geo Chem, Inc. 1994 July 1: Appendix A; *Oakland Tribune* 1960 September 4; *Oakland Tribune* 1961 October 27; *Oakland Tribune* 1960 August 7).

In 1962, Royal Research which manufactured enclosures for safe handling of radioactive and hazardous materials, commissioned construction of a 25,000-square-foot research and development facility on the subject property (**Plate 1** and **Plate 2**). The building housed offices and small laboratory spaces with a central courtyard in the north end, and the main laboratory area in the taller south end. Construction of the facility totaled nearly $350,000 with an additional $350,000 for equipment and was completed by the end of the year (*Stockton Daily Evening Record* 1962 July 31; *Daily Review* 1962 August 22).

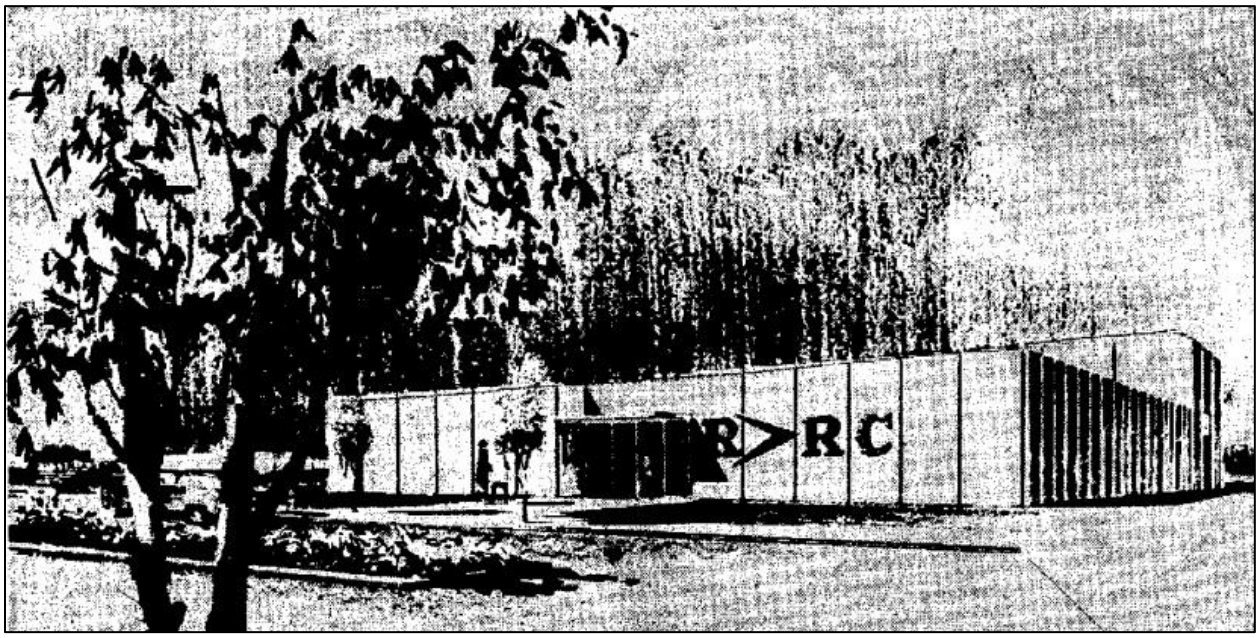

Plate 1: 1962 architectural rendering of the Royal Research Corporation building, which is the east half of the extant facility. Note the east courtyard is in the building section in the foreground (Source: *Daily Review* 1962 August 22).

Royal Research continued to occupy the facility until 1966 when it was sold to Hexcel Products, Inc. (Hexcel). Based in Berkeley, Hexcel was the largest developer and manufacturer of honeycomb, a structural material used in a number of applications, primarily associated with the aeronautics and aerospace industries. When looking to relocate from Berkeley, the executives at Hexcel sought a site somewhere between Carquinez Strait and Palo Alto, preferably near a college campus to draw from a technical labor pool for research and development, with the former Royal Research facility fitting its needs. Soon after the purchase, Hexcel announced a million-dollar, 20,000-square foot expansion of the research and development facility with a new administrative headquarters designed by San Francisco architecture firm Lackey, Knorr, Elliott & Associates. Hexcel closed their headquarters in Berkeley and relocated to Dublin and moved their manufacturing plants in Berkeley and Oakland to plants in Arizona,

Texas, and Maryland (Hydro Geo Chem, Inc. 1994 July 1: Appendix A; *Oakland Tribune* 1966 May 18; *Oakland Tribune* 1967 November 12; *San Francisco Examiner* 1966 May 18; *Contra Costa Times* 1967 February 24).

Plate 2: 1965 photograph showing the original 1962-constructed building with the visible courtyard (now the east courtyard) (Source: UCSB 1965).

Hexcel's new headquarters addition, completed in early 1967, housed the engineering, marketing, finance and general administrative staff. The original 1962 section was utilized as laboratory space for further research and development (**Plate 3**). Hexcel president William S. Powell understood that technical employees were in great demand and wanted to entice new hires, so the building design included full-height tinted glass windows, courtyards, enclosed breezeways, and patios to provide outdoor views along with comfortable, carpeted workspaces, air conditioning, and taped music piped through an internal speaker system (**Plate 4** and **Plate 5**) (*Contra Costa Times* 1967 March 26; *Contra Costa Times* 1967 February 24; *Oakland Tribune* 1967 November 12).

The Hexcel facility remained the same until the 1980s. In 1984 construction of a two-story hyphen connected the 1962 and 1967 buildings, resulting in a central courtyard. A small lab and chemical storage addition was constructed at the southeast corner of the facility the following year (*Oakland Tribune* 1984 May 16; *Oakland Tribune* 1984 July 11; *Oakland Tribune* 1985 November 13).

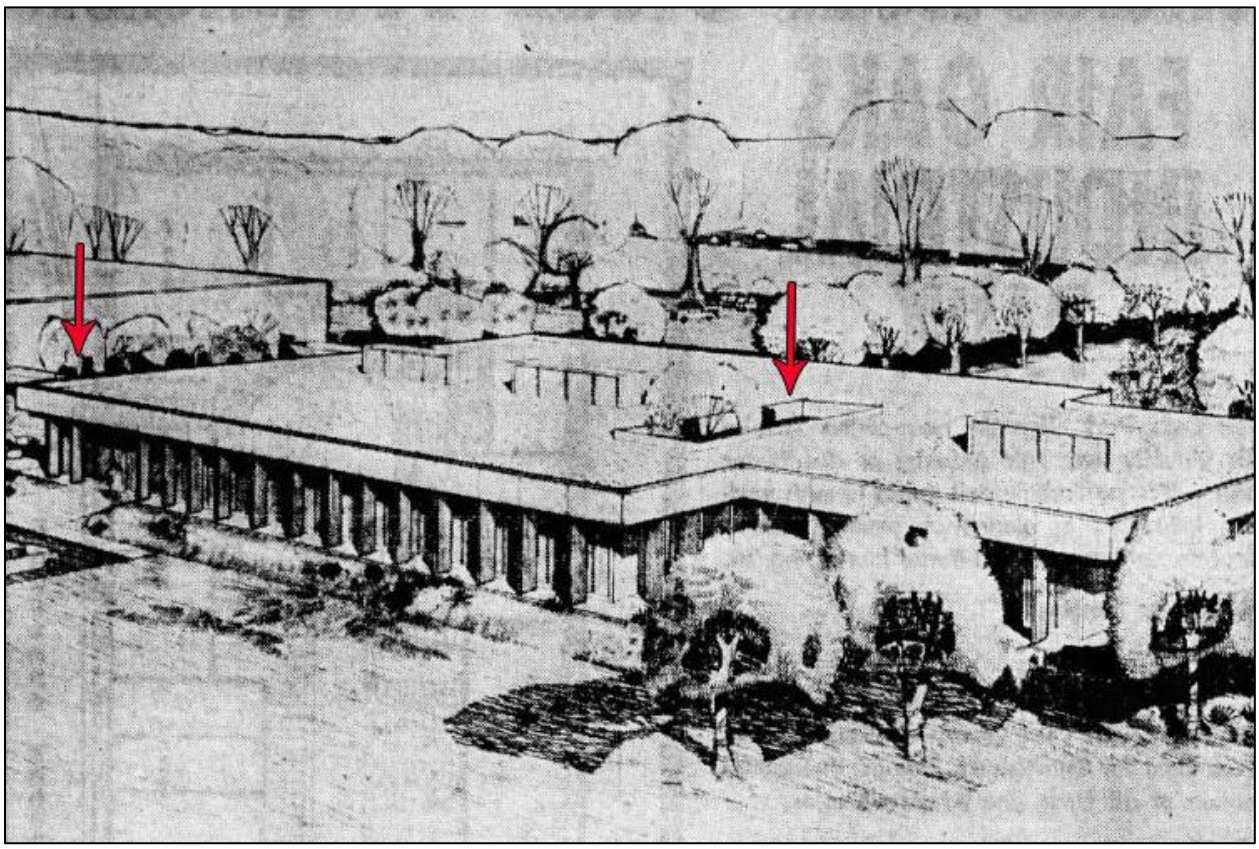

Plate 3: 1967 architectural rendering of the Hexcel addition with the 1962 building section on the far left. The arrow on the left indicates the location of the central courtyard prior to enclosure and the arrow on the right indicates the location of the west courtyard (Source: *Contra Costa Times* 1967 March 26).

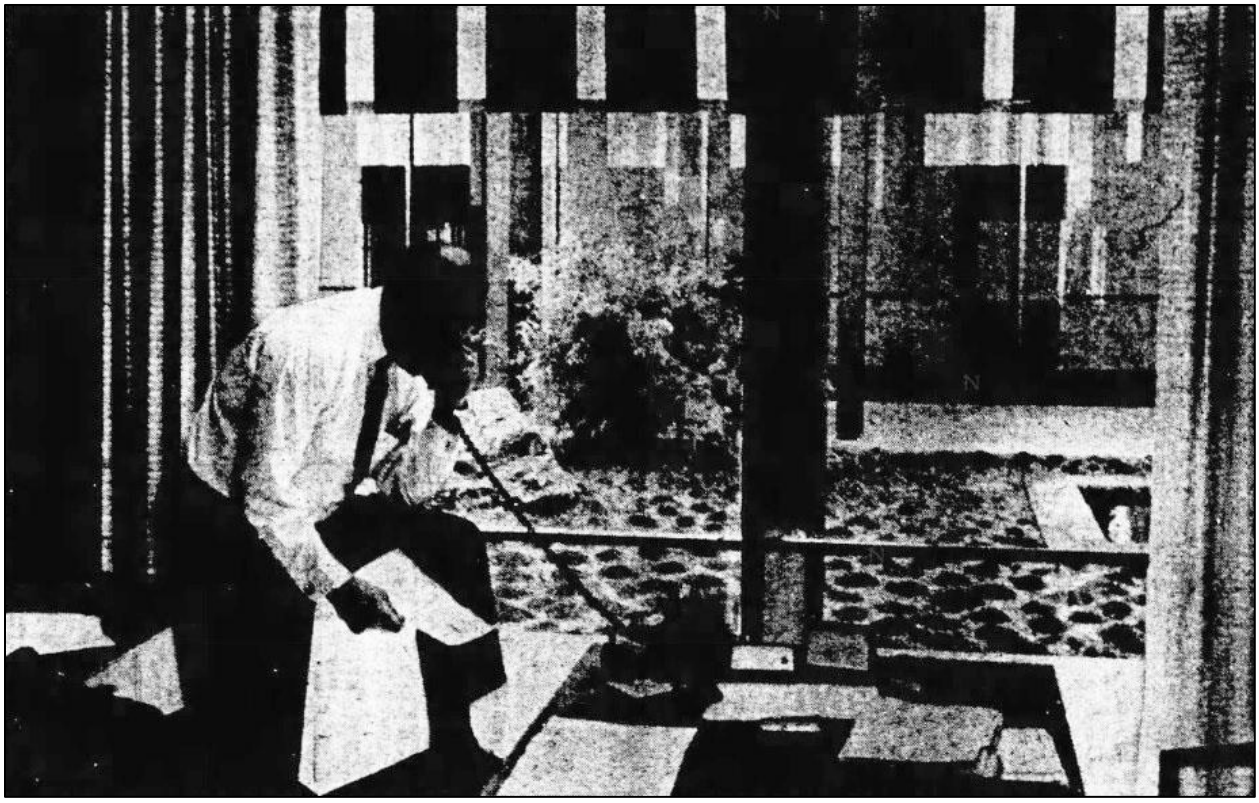

Plate 4: 1967 photograph with view of west courtyard from office along the east side. Note the border of the courtyard water feature on the far right and original Irish moss planted as ground cover (Source: *Oakland Tribune* 1967 November 12).

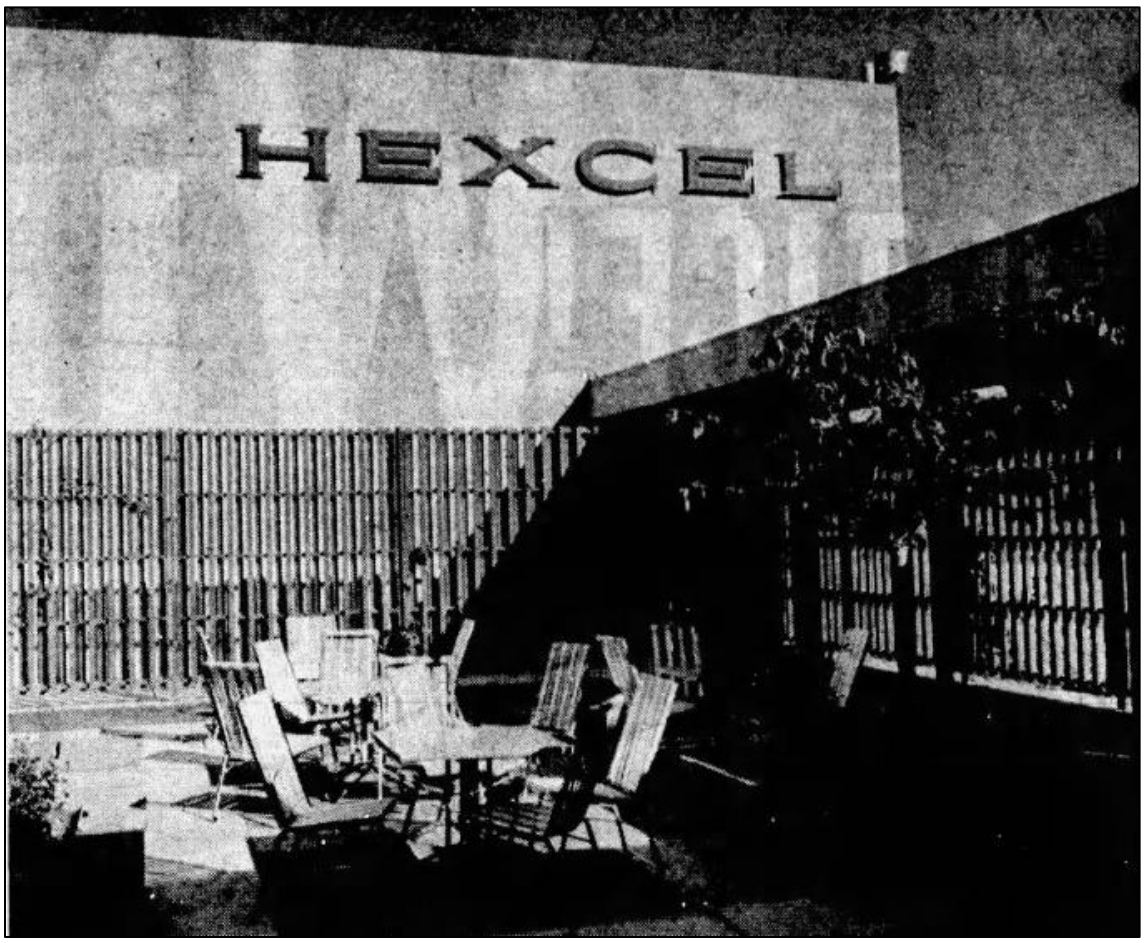

Plate 5: 1967 photograph of a patio area with privacy screens added at northwest corner of the 1962 building section during the 1967 facility expansion. Note the privacy screens and signage are no longer extant (Source: *Oakland Tribune* 1967 November 12).

Royal Research Corporation

Royal Research Corporation, originally called Dublin Industries, was founded in Berkeley in 1959 by former Lawrence Radiation Laboratory staff (now known as the Lawrence Berkeley National Laboratory). The company focused on producing custom-made mechanical devices to handle radioactive materials. General Electric served as their primary customer for handling material at the Vallecitos Atomic Laboratory in nearby Sunol. In 1960, the company expanded into research, hiring Dr. William W.T. Crane, who headed heavy elements processing at Lawrence Radiation Laboratory from 1948 to 1958. Crane would later become president of the company. Dublin Industries merged with the Pasadena-based Royal Industries in August 1960, which was an engineering firm. After the merger, Dublin Industries was renamed Royal Research Corporation, operating as a subsidiary to Royal Industries (*Daily Review* 1962 August 22; *Los Angeles Times* 1957 October 11).

The first major research contract obtained by Royal Research was to develop an isotopic power supply for the Atomic Energy Commission that resulted in the creation of thermo-electric generators for underwater seismic stations that could last several years. Within two years, Royal Research expanded research into vacuum devices to handle reactive materials, energy conversion, and microwave technology; 90 percent of their contracts were with the U.S. government (*Daily Review* 1962 August 22).

In June 1963, Royal Industries, Inc. sold Royal Research to General Technology Corporation which included use of the Dublin plant (subject facility). Royal Industries, Inc. retained ownership of the plant before selling the facility to Hexcel Products, Inc. in 1966 (*Pasadena Independent* 1963 June 5; Hydro Geo Chem, Inc. 1994 July 1: Appendix A).

Hexcel Corporation

Hexcel Corporation can trace its formation to 1946 when two University of California alumni, Roger C. Steele and Roscoe T. "Bud" Hughes decided to experiment with new construction material technologies developed during World War II, including plastics, in Hughes' basement at his house in Berkeley. Steele's experimentation led to the creation of structural honeycomb, which he demonstrated at a government-sponsored plastics conference as the California Reinforced Plastics Company (**Plate 6**). This demonstration secured a research and development contract of his expandable honeycomb for use in military aircraft radar domes in 1948. That same year, the company hired chemist Ken Holland to oversee resin research and development. The company furthered their ties with the military in 1949 when they won a low-bid contract to develop honeycomb fuel cell support panels for B-36 bombers (Pederson, ed. 1999: 193; *Oakland Tribune* 1967 May 22; Hexcel.com 2023; *Contra Costa Times* 1967 March 26).

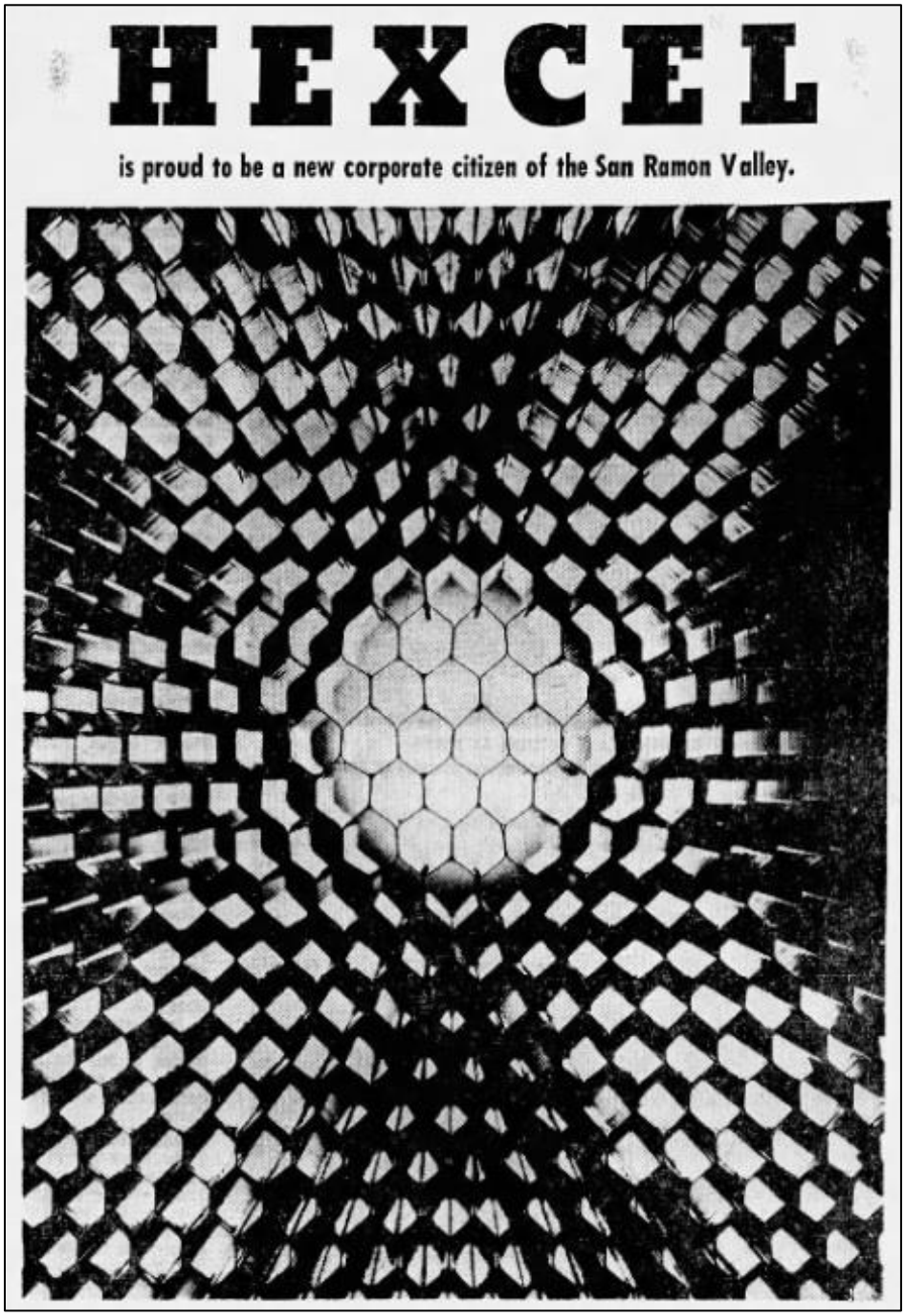

Plate 6: Photograph of Hexcel's structural honeycomb material (Source: *Contra Costa Times* 1967 March 26).

In 1954, the company changed its name to Hexcel Products Inc. and continued creating honeycomb in a variety of materials including plastic, aluminum, fiberglass and paper, resulting in the highest strength-to-weight ratio material on the market with excellent energy absorption properties. Although the technology was initially used in aerospace, implementation of paper materials expanded use into commercial and residential building materials for use in interior partitions and mobile homes, and well as furniture manufacturing. By the end of the decade, Hexcel ran its headquarters out of Berkeley in a shared warehouse building at 2332 Fourth Street and had opened manufacturing plants in Berkeley, Oakland, and Havre de Grace in Maryland (*Contra Costa Times* 1967 March 26; Pederson, ed. 1999: 193; *Oakland Tribune* 1959 September 17; *San Francisco Examiner* 1962 July 2).

In the 1960s, Hexcel had several large contracts with the National Aeronautics and Space Administration (NASA), military, and commercial aviation clients. In 1968 Hexcel acquired Coast Manufacturing and Supply Company in Livermore and diversified the company's product range beyond structural honeycomb to include reinforced plastics, industrial glass fabrics, structural adhesives, industrial resin compounds, and diffusion bonded assemblies. This shift occurred as the Federal government began to divest large-scale pursuits and the public's interest in government programs shifted following the moon landing and withdrawal from Vietnam in 1969. Using the new materials procured from the Coast acquisition, Hexcel designed and produced high-performance snow skis. These were the first commodity made for the direct retail market (*Times Record News* 1970 April 10; Hexcel.com 2023; Pederson, ed. 1999: 193-194).

Hexcel continued to diversify its portfolio in the 1970s with the acquisition of a graphite weaving company and a knee, hip, and shoulder joint replacement manufacturer. By the end of the decade only half of their sales were from honeycomb (Pederson, ed. 1999: 194).

An economic downturn and oil crisis at the end of the 1970s led to the sale of the ski and medical products and a returned focus on aviation and aerospace. The company secured a number of high value contracts, for example with NASA for components in the Columbia Space Shuttle, with Boeing, their largest customer accounting for 20 percent of total sales, and with the U. S. Air Force for its new B-2 bomber program that prompted construction of a new 160,000-square-foot manufacturing plant in Arizona. However, deregulation of the airline industry by President Ronald Reagan cut airline profits, leading to reductions of Hexcel's Boeing and Airbus orders (Hexcel.com 2023; *Oakland Tribune* 1988 June 6).

The early 1990s were tumultuous for the company starting with a Chapter 11 bankruptcy protection filing in 1993. After layoffs and plant and asset sales, the company avoided bankruptcy. In 1996 Hexcel merged with two composites companies to improve vertical integration; the new combined firm had a total of 4,700 employees with 19 manufacturing plants in seven countries (Pederson, ed. 1999: 194-195).

Since the late 1990s, Hexcel continued to lead research and development in honeycomb, carbon fiber, and resin structural materials. The company has contracts with a number of aerospace companies including Airbus, Boeing, SpaceX, Blue Origin, and Lockheed Martin. In May 2021, a groundbreaking ceremony was held in West Valley City, Utah for the company's new research and technology headquarters with plans to vacate the Dublin facility in 2023 (Hexcel.com 2023).

Hexcel and NASA

In 1958, NASA utilized Hexcel honeycomb in their first spacecraft, *Pioneer 1.* The satellite probe included eight square feet of fiberglass reinforced Hexcel honeycomb plastic that only weighed 15 ounces. At a press conference hosted by Hexcel president Roger C. Steele in October 1958, he lauded the company's honeycomb "structural sandwich" construction as the "highest strength to weight ratio of any material known to man" and could be used "to build a space vehicle of extraordinary strength with an absolute minimum of weight" (*Oakland Tribune* 1958 October 23). The special fiberglass reinforced plastic honeycomb was developed for radio and electrical transmission properties, and the structural sandwich construction created a heat resistant barrier to protect the internal instrumentation. Although *Pioneer 1*

was meant to orbit the moon, a programming error resulted in the satellite only traveling 71,300 of the 222,000 miles, but did collect data of the extent of the Earth's radiation belts (*Concord Transcript* 1958 December 8).

Success of the structural integrity of *Pioneer 1* led to more contracts between Hexcel and NASA. By the early 1960s, Hexcel developed cutting-edge materials for several space programs and missions including the Mariner Program satellites (1960-1975); Project Mercury spacecraft (1958-1961); Project Gemini spacecraft (1961-1966); and Apollo Program command and lunar module spacecraft (1960-1972). Hexcel honeycomb protected John Glen as he became the first American to orbit the earth in February 1962 in *Friendship 7*, part of the Mercury program (*Oakland Tribune* 1962 September 23; Hexcel.com 2023; *Contra Costa Times* 1970 June 21).

Hexcel continued research and development for NASA through the 1960s and created several types of honeycomb for NASA spacecraft. The *Apollo 8* capsule held three astronauts when it left Earth's and orbited the Moon ten times in December 1968 and contained layers of honeycomb to create the lightweight but high-strength structural capsule shell. A cylindrical honeycomb called "tube-core" was installed under the astronauts' seats to help absorb G-force energy loads. A heatshield made of stainless-steel honeycomb and steel alloy sheets and an internal reinforced plastic honeycomb ablative heat shield were placed on the inside and outside of the capsule (*Contra Costa Times* 1968 December 4). This same structural and heat protection honeycomb was used in subsequent capsules in the Apollo program, including *Apollo 9* (**Plate 7**) and *Apollo 11*. Hexcel also developed a new honeycomb used on the *Apollo 11* lunar module landing struts and footpads for the first moon landing in July 1969. This specific honeycomb design crushed and folded-in on itself to a absorb the impact of the landing and prevent bouncing (**Plate 8**) (*Contra Costa Times* 1967 March 26; *Contra Costa Times* 1969 March 28; *Times Record*

HONEYCOMB COCOON

In their ten-day lunar test flight, the Apollo 9 astronauts were protected against severe "G" forces and heat during blast-off and re-entry by a virtual cocoon of Hexcel aluminum honeycomb. Aluminum honeycomb forms the core of many sections of the Apollo spacecraft's inner structural shell, providing the greatest strength and rigidity at the lowest possible weight. Special cylindrical honeycomb devices from Hexcel installed under the crew's seats protected them from excessive "G" loadings—pressures many times normal gravity. And a heat shield made of stainless steel honeycomb core faced with steel alloy sheets helped protect the spacecraft and crew from vaporizing in the heat of re-entry. Hexcel, which produces honeycomb for industrial as well as aerospace applications, is headquartered in Dublin, California.

Plate 7: Drawing and description of Hexcel honeycomb for *Apollo 9* (Source: *Contra Costa Times* 1969 March 28).

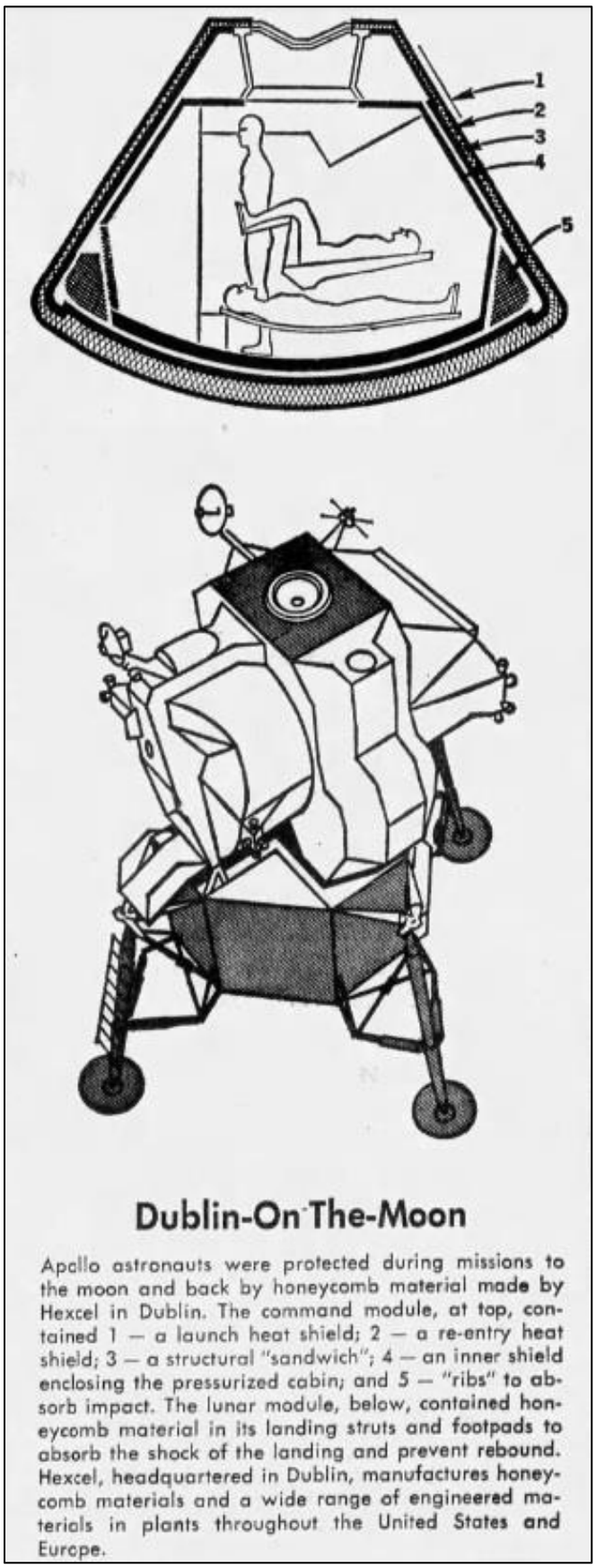

Plate 8: Diagrams showing where Hexcel honeycomb was utilized on the Apollo 11 lunar landing module (Source: *Contra Costa Times* 1967 March 26).

News 1970 April 10). After the moon landing, a local newspaper interviewed proud Hexcel employees at the headquarters in Dublin. While the newspaper noted that 300,000 people from 20,000 companies were involved in some capacity with the moon landing, Hexcel stood out because they "developed the best material NASA has found for use in spacecraft" (*Argus* 1969 July 24).

Hexcel continued its NASA relationship into the 1970s and development of the Space Shuttle program. Hexcel honeycomb was used in the nose cap, payload doors, and wings in the first space shuttle *Columbia* that launched in April 1981. *Columbia* flew 28 missions during its 22 years in service (NASA.gov 2023; Hexcel.com 2023).

Hexcel also supplied $1 million worth of materials for the *Discovery* Space Shuttle launched in August 1984. Honeycomb was used in the cargo bay doors, a new carbon composite heat shield material that could be used on several missions before needing to be replaced and wove high-temperature resistant ceramic fabric to line the flight crew's cabin to protect them from extreme heat upon earth re-entry (*Seguin Gazette Enterprise* 1988 September 30; Hexcel.com 2023).

Lackey, Knorr & Elliott (1967 Hexcel addition)

Hexcel commissioned the large headquarters addition to the 1962 former Royal Research facility in 1967 from architects Lackey, Knorr & Elliott, based out of San Francisco. Donald R. Knorr and Edward P. Elliott formed their first partnership Knorr-Elliott & Associates in 1958. The firm received awards of excellence from *Architectural Record* for residential designs in 1958 and 1963; a citation for the Dux Incorporated furniture company headquarters and warehouse in South San Francisco in 1963; a merit award for a dental plaza in Stanford in 1963; and an environmental award for the Koret of California distribution plant in South San Francisco in 1968 (**Plate 9**) (PCAD 2023b; AIA 1970: 516). In 1967, the partnership included architect Lawrence Lackey, with the 1967 Hexcel addition appearing to be the only design produced by the collaboration (*Oakland Tribune* 1967 November 12). Lackey was an urban planner, architect, and landscape architect

based out of San Francisco, active between the late 1950s and 1970s. He was best known for the Master Plan he designed for the University of Fairbanks in Alaska in 1965 (PCAD 2023a; *Contra Costa Times* 1967 March 26).

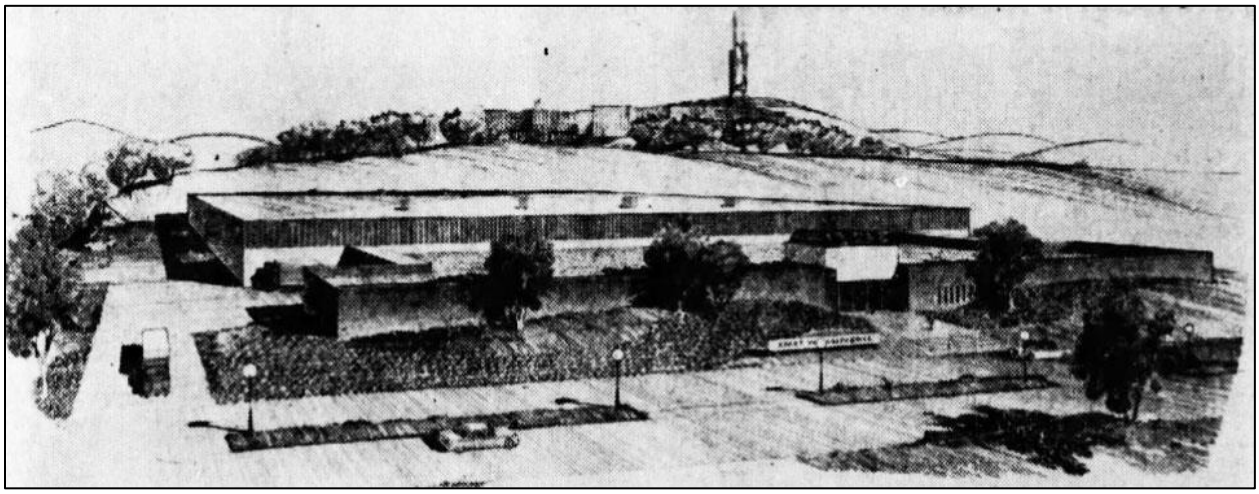

Plate 9: Architectural rendering of the Knorr-Elliott & Associates design for Koret of California distribution center (Source: *San Francisco Examiner* 1966 June 26).

Contemporary and Brutalist Architecture

The original architect of the 1962-constructed portion of the facility was not discovered in the historic record. This portion of the building was constructed with tilt-up concrete panels, which was a construction technique developed in the 1920s. Its methods were subsequently refined, and by 1962, when this building was constructed, tilt-up construction was common (Collins 1951 October: 1335-135; Jansen 1952 September: 243-245).

The 1967-constructed portion of the facility was designed with a blend of Contemporary and Brutalist styles. The Contemporary style, popular between about 1940 and 1980, is characterized by strong roof forms including flat, gabled, shed, or butterfly roofs, typically with deep overhangs; large windows, often aluminum-framed; non-traditional exterior finishes including vertical wood siding, concrete block, stucco, flagstone, and mullion-free glass; angular massing; sun shades, screens, or shadow block accents; horizontally oriented commercial buildings; distinctive triangular, parabolic, or arched forms; "eyebrow" overhangs on commercial buildings, and integrated, stylized signage on commercial buildings (McAlester 2013: 628-632). The building also has elements of Brutalism, which was popular from the late 1950s to mid-1970s and commonly used for educational and civic buildings. Brutalism is characterized by unadorned rough concrete, heavy block shapes, large massing, flat roofs, and window voids in the larger concrete massing. This aesthetic emerged in post-war Europe and was derived from the French phrase "beton brut," which means raw or rough concrete. However, the 1967-constructed portion of the facility does not have the rough concrete finish seen in most Brutalist buildings and instead employs a stucco finish concrete throughout the exterior (PAST Consultants, LLC. 2009 June: 85-86).

Historic Significance Criteria and Evaluation

Man in Space National Historic Landmark Theme Study

Congress passed Public Law 96-344 in 1980 which directed the Secretary of the Interior to produce a study that identified events and locations associated with the "Man in Space" theme to be brought into the National Park system and ways to present these significant locations, structures, and objects to the public. It also required evaluation of the resources identified with the Man in Space theme for recommendation as National Historic Landmarks (NHLs). The resulting study was first published in 1984 as "Man in Space: A National Historic Landmark Theme Study," prepared by Dr. Harry A. Butowsky. In it, Butowsky identified 23 research and development facilities, testing facilities and stands, astronaut training facilities, tracking stations, mission control centers, a launch pad, and the Saturn 5 Space Vehicle

that he recommended as NHLs and prepared NRHP Nomination Forms for each resource (Butowsky 1984 May: *passim*). Butowsky acknowledges that undoubtedly contractor-owned facilities and sites played significant roles in the United States's pursuit to the moon and subsequent space programs, however this document in its first phase does not identify or provide guidance about these properties.

The original report does however identify four significant themes for the Man in Space context which resources would be considered historically significant. They include: 1. Technical Foundations before 1958; 2. The Effort to Land a Man on the Moon; 3. The Exploration of the Planets and the Solar System; and 4. The Role of Scientific and Communications Satellites. These four subthemes provided a foundation for identification of significant properties. However, this early report lacks the details to clearly spell out what types of properties would or would not be significant under these subthemes for modern NRHP analysis.

A second phase of the report was published later in 1984 that identified another launch pad as well as three spacecrafts, which were not previously identified in the first report. The three spacecrafts, Mercury *Friendship 7* (1962), *Gemini 4* (1964), and the *Apollo 11* Command Module (1969) were all located in the National Air and Space Museum at the Smithsonian Institution in Washington, D.C. Butowsky declared the three spacecrafts as "nationally significant historic objects … it is important to recognize the national significance of the objects having internal integrity which have contributed critically to the success of the space program and, together, form an integral chapter in that program's history" (Butowsky 1984 August:1-2). These spacecrafts represented a first, or breakthrough, for each program's mission. While the first phase of the report stated that the second phase would examine the importance of contractors, it was not included. Butowsky did not specifically call out any private company, but he described the use of Hexcel fiberglass honeycomb in the description of the *Apollo 11* Command Module. All three of these spacecrafts contain honeycomb developed by Hexcel for NASA (Butowsky 1984 August: *passim*).

California Register of Historical Resources Significance

The criteria for listing historical resources in the CRHR are consistent with those developed for listing in the NRHP but have been modified for state use in order to include a range of historical resources which better reflect the history of California. An historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
2. is associated with the lives of persons important to local, California or national history;
3. embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values; or
4. has yielded, or may be likely to yield, information important in prehistory or history of the local area, California or the nation.

CRHR 1

Under CRHR Criterion 1, the Hexcel facility at 11711 Dublin Boulevard is significant at the national level for its association with the Man in Space historic context under subtheme 2. The Effort to Land a Man on the Moon. Specifically, the research and development of materials by Hexcel were integral to the success of NASA's *Pioneer 1*, Project Mercury, Gemini, and Apollo. The honeycomb technology and materials developed by Hexcel allowed NASA to build strong, heat-resistant, yet lightweight spacecrafts that could withstand the stressors of space and protect its human occupants. Use of Hexcel honeycomb in the three NHL significant objects, Mercury *Friendship 7* Spacecraft (1962), *Gemini 4* Spacecraft (1964), and the *Apollo 11* Command Module (1969) are of fundamental importance to the United States and its success in the Space Race to the moon. Furthermore, Hexcel's crushable honeycomb used on the landing struts and footpads of the *Apollo 11* lunar module were the first objects to touch the moon in July 1969 and were pivotal to the success of the moon landing.

While the Hexcel honeycomb utilized in *Friendship 7* and the *Gemini 4* spacecrafts was developed at Hexcel's first research and development lab in Berkeley, the *Apollo 11* mission took place two years after Hexcel expanded the facility in Dublin into its research and development and administrative headquarters. This clear association with subtheme 2 demonstrates how Hexcel's Dublin facility played a significant role at the national level for the successful moon landing in 1969.

Additional significance evaluation of Hexcel's Dublin facility is required, because it is not the only example of Hexcel's importance in The Effort to Land a Man on the Moon. Hexcel's first research and development facility was located in a shared warehouse at 2332 Fourth Street in Berkeley that they occupied between 1957 and 1967 (*Oakland Tribune* 1957 June 23; *Contra Costa Times* 1967 March 26). While this building is where Hexcel employees developed the first honeycomb used for NASA, the purpose-built research and development and administration headquarters built in Dublin is a better representation of the company's significance as a leader in structural honeycomb technology. Moreover, the building at 2332 Fourth Street in Berkeley appears to have undergone extensive remodeling new windows, doors, and scored concrete finish. As such, the building has lost integrity of design, materials, workmanship, and feeling of the timeframe that Hexcel occupied the building. As discussed below, Hexcel's Dublin facility retains sufficient integrity to the established period of significance and is therefore, a better representation of Hexcel's significance under this criterion.

CRHR 2

Under CRHR Criterion 2, this facility is not associated with a significant individual. The facility has been utilized by countless research and development staff, and research did not reveal any individuals who made demonstrably important contributions to history at the local, state, or national level. While Roger C. Steele is credited with creating Hexcel's first structural honeycomb, he developed it in the mid- to late 1940s in Roscoe Hughes' basement in Berkeley, and the honeycomb used on *Friendship 7* and the *Gemini 4* were developed at the company's facility in Berkeley. The house and the Berkeley laboratory have stronger associations with Steele's technological successes rather than the Hexcel facility in Dublin, therefore, this facility is not eligible under this criterion.

CRHR 3

Under CRHR Criterion 3, this facility is not significant because it is not an important example of a type, period, or method of construction. The building is a combination of Contemporary and Brutalist styles. The Contemporary style proliferated for commercial and residential buildings in the post-World War II era throughout the Bay Area, California, and the nation. The overall facility is a typical example of this style and is unremarkable. It also lacks the high artistic value or distinctive design or engineering that would merit listing in the CRHR.

Additionally, this facility does not represent the work of a master. There is no indication that the 1962-constructed portion of the facility is the work of a maser architect or would be considered a good example of a master architect's portfolio if further research determined that it was designed by a master architect. The 1967-constructed portion of the facility was a singular design through a collaboration of Lawrence Lackey and Knorr-Elliott & Associates. There is no indication that Lawrence Lackey would be considered a master. Likewise, while the Knorr-Elliott & Associates partnership received awards, there is no indication that either Knorr or Elliott rise to the level of a master architect. Therefore, the facility is not eligible under this criterion.

CRHR 4

Criterion 4 is typically used to evaluate archaeological sites for their potential to yield data important to understanding the prehistory of the area or region. For built environment resources, under CRHR Criterion 4, this facility does not appear to have any likelihood of yielding important information about historic construction materials or technologies, and therefore, does not appear to be eligible under this criterion.

Integrity Analysis

Historical resources eligible for listing in the CRHR must meet one or more of the criteria of significance and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. The resource must retain integrity to its period of significance to be considered eligible for listing. The period of significance of the Hexcel facility under subtheme 2: The Effort to Land a Man on the Moon is 1967 when the company expanded and relocated to the Dublin facility and 1969 when *Apollo 11* landed on the moon.

Integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data. Historic integrity is made up of seven aspects: location, design, setting, materials, workmanship, feeling, and association.

The character-defining features of the Hexcel facility are: the interspatial connection between the 1962-constructed research and development laboratory building section on the east half and the 1967-constructed administration area on the west half; the repeating narrow, concrete pylons with wood sheathing and full-height, tinted fixed windows with black anodized frames on the administration building section; the lack of windows in the laboratory building section; and the east courtyard and west courtyards.

Location *is the place where the historic property was constructed or the place where the historic event took place.* The location of this facility has remained the same; therefore, the integrity of location remains intact.

Design *is the combination of elements that create the form, plan, space, and style of a property*. The facility was altered from the original 1967 Hexcel design with the two-story building hyphen added in 1984 and the small chemical storage addition at the rear of the facility in 1985. These changes only slightly modified the form and plan of the original 1967-constructed facility.

Setting *is the physical environment of a historic property.* The immediate setting of the property continues to be a mixture of post-war residential and commercial construction.

Materials *are the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form a historic property.* None of the changes made to the facility changed the materials used in the 1962 or 1967 building sections. The materials used in the 1984 and 1985 additions were sympathetic in both material, texture, and color to the extant building sections.

Workmanship *is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.* The additions made in 1984 and 1985 are complementary to the Hexcel design and do not diminish the integrity of workmanship of the 1962- or 1967-constructed portions of the facility.

Feeling *is a property's expression of the aesthetic or historic sense of a particular period of time*. While the two-story building hyphen added in 1984 and the small chemical storage addition at the rear of the facility in 1985 have lightly affected integrity of design, the facility still conveys the feeling as a 1960s-constructed research and development facility.

Association *is the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer*. The facility is where research and development occurred to put a man on the moon between 1967 and 1969, and at the time of recordation, was still occupied by Hexcel. The facility retains integrity of location, design, setting, materials, workmanship, and feeling as a

1960s-constructed research and development facility, and therefore, retains a direct association with the Man in Space historic context under subtheme 2. The Effort to Land a Man on the Moon.

Historical Significance Conclusion

Based on the results of this historical resource evaluation, the Hexcel facility at 11711 Dublin Avenue is eligible for listing in the CRHR under Criterions 1 because it is significant at the national level for its association with the Man in Space historic context under subtheme 2. The Effort to Land a Man on the Moon and retains sufficient integrity to its period of significance (1967 and 1969). The property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code and is a historical resource for the purposes of CEQA.

References

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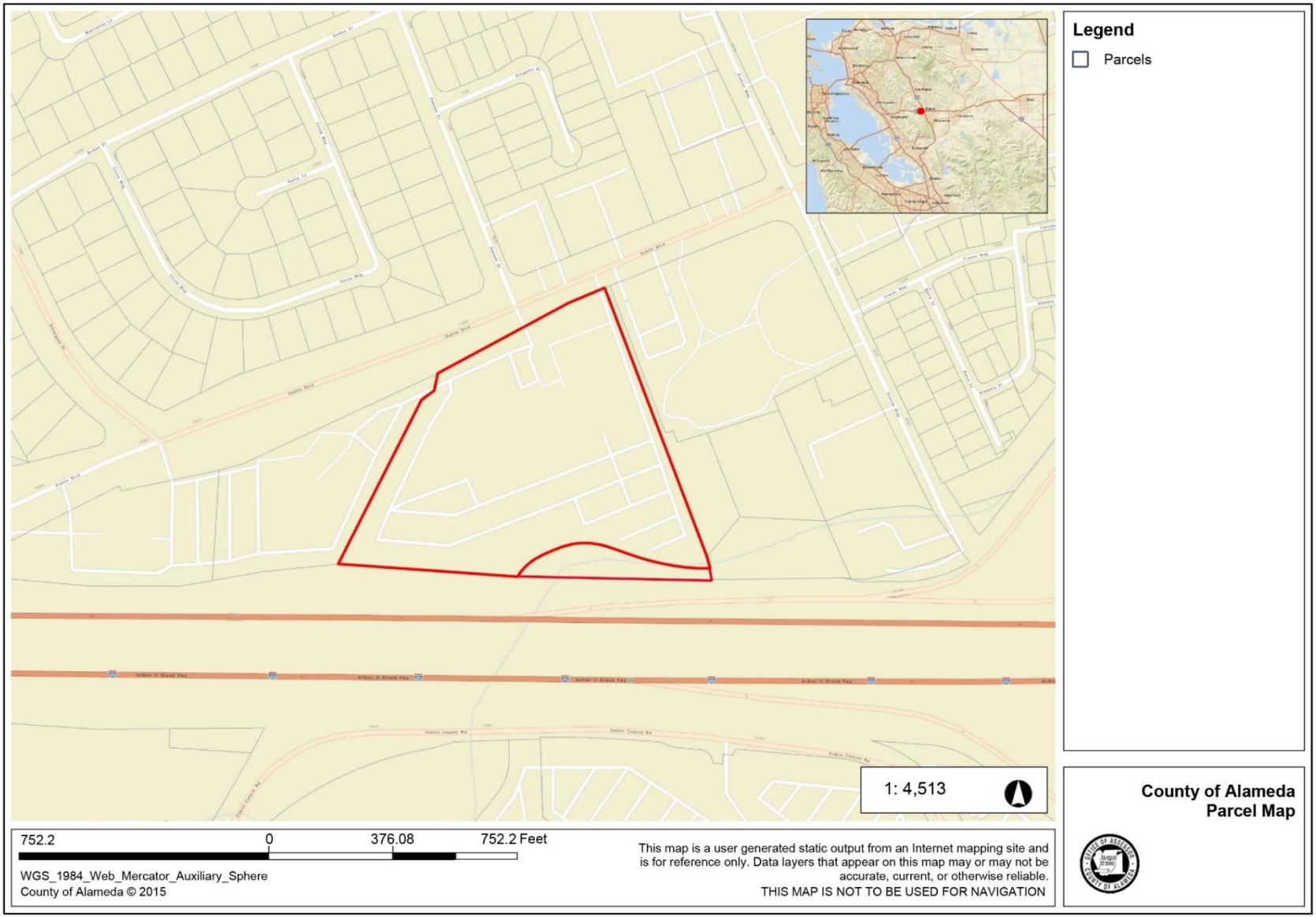
Attachment - Location Map



Appendix D: CalEEMod Output Sheets

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Hexcel Redevelopment
Construction Emissions By Phase and Source

Phase	Year	Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Demolition	2023	Off-Road	0.067	0.6338	0.5317	1.06E-03	0	0.0296	0.0296	0	0.0278	0.0278	0	92.8197	92.8197	0.0216	0	93.3606
Demolition	2023	Fug Dust	0	0	0	0	0.0309	0	0.0309	4.67E-03	0	4.67E-03	0	0	0	0	0	0
Demolition	2023	Hauling	1.26E-03	0.08	0.0181	3.60E-04	0.0103	6.80E-04	0.011	2.84E-03	6.50E-04	3.49E-03	0	35.457	35.457	7.50E-04	5.60E-03	37.1452
Demolition	2023	Vendor	7.00E-05	2.84E-03	8.60E-04	1.00E-05	4.30E-04	2.00E-05	4.40E-04	1.20E-04	2.00E-05	1.40E-04	0	1.2574	1.2574	2.00E-05	1.90E-04	1.3139
Demolition	2023	Worker	1.27E-03	8.70E-04	0.0108	3.00E-05	3.85E-03	2.00E-05	3.87E-03	1.03E-03	2.00E-05	1.04E-03	0	3.0013	3.0013	9.00E-05	8.00E-05	3.0287
Site Prep-Grading	2023	Off-Road	0.017	0.1973	0.1097	3.20E-04	0	6.83E-03	6.83E-03	0	6.29E-03	6.29E-03	0	27.6882	27.6882	8.95E-03	0	27.9121
Site Prep-Grading	2023	Fug Dust	0	0	0	0	0.0114	0	0.0114	1.26E-03	0	1.26E-03	0	0	0	0	0	0
Site Prep-Grading	2023	Hauling	3.00E-05	1.64E-03	3.70E-04	1.00E-05	2.10E-04	1.00E-05	2.30E-04	6.00E-05	1.00E-05	7.00E-05	0	0.7284	0.7284	2.00E-05	1.20E-04	0.7631
Site Prep-Grading	2023	Vendor	2.00E-05	9.20E-04	2.80E-04	0	1.40E-04	1.00E-05	1.40E-04	4.00E-05	1.00E-05	5.00E-05	0	0.4062	0.4062	1.00E-05	6.00E-05	0.4245
Site Prep-Grading	2023	Worker	4.10E-04	2.80E-04	3.50E-03	1.00E-05	1.25E-03	1.00E-05	1.25E-03	3.30E-04	1.00E-05	3.40E-04	0	0.9696	0.9696	3.00E-05	3.00E-05	0.9785
Trenching	2024	Off-Road	3.40E-03	0.0299	0.0578	9.00E-05	0	1.42E-03	1.42E-03	0	1.31E-03	1.31E-03	0	7.6397	7.6397	2.47E-03	0	7.7015
Trenching	2024	Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trenching	2024	Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trenching	2024	Worker	1.50E-04	1.00E-04	1.24E-03	0	4.70E-04	0	4.80E-04	1.30E-04	0	1.30E-04	0	0.3574	0.3574	1.00E-05	1.00E-05	0.3606
Bulding Construction-Exterior	2024	Off-Road	0.0822	0.7366	0.8868	1.60E-03	0	0.0325	0.0325	0	0.0313	0.0313	0	137.3069	137.3069	0.02	0	137.8069
Bulding Construction-Exterior	2024	Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulding Construction-Exterior	2024	Vendor	2.69E-03	0.1198	0.0354	5.40E-04	0.0179	7.30E-04	0.0187	5.19E-03	7.00E-04	5.88E-03	0	51.9666	51.9666	7.20E-04	7.79E-03	54.3048
Bulding Construction-Exterior	2024	Worker	0.0167	0.011	0.142	4.40E-04	0.0542	2.70E-04	0.0544	0.0144	2.50E-04	0.0147	0	40.7957	40.7957	1.14E-03	1.10E-03	41.1533
Paving	2024	Off-Road	0.0104	0.0979	0.1466	2.30E-04	0	4.69E-03	4.69E-03	0	4.33E-03	4.33E-03	0	19.6486	19.6486	6.21E-03	0	19.8037
Paving	2024	Paving	2.54E-03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paving	2024	Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paving	2024	Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paving	2024	Worker	5.40E-04	3.50E-04	4.58E-03	1.00E-05	1.75E-03	1.00E-05	1.76E-03	4.60E-04	1.00E-05	4.70E-04	0	1.3166	1.3166	4.00E-05	4.00E-05	1.3281
Building Interior - Arch Coating	2024	Off-Road	5.31E-03	0.0414	0.0675	1.10E-04	0	1.74E-03	1.74E-03	0	1.73E-03	1.73E-03	0	9.3932	9.3932	1.29E-03	0	9.4254
Building Interior - Arch Coating	2024	Arch Coating	0.6917	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Building Interior - Arch Coating	2024	Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Building Interior - Arch Coating	2024	Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Building Interior - Arch Coating	2024	Worker	7.00E-04	4.60E-04	5.93E-03	2.00E-05	2.26E-03	1.00E-05	2.27E-03	6.00E-04	1.00E-05	6.10E-04	0	1.7038	1.7038	5.00E-05	5.00E-05	1.7187

Annual Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2023	0.09	0.92	0.67531	0.0018	0.05848	0.04	0.09566	0.01035	0.03	0.04515	0	162.3278	162.3278	0.03147	0.00608	164.9266
2024	0.82	1.04	1.34785	0.00304	0.07658	0.04	0.11796	0.02078	0.04	0.06046	0	270.1285	270.1285	0.03193	0.00899	273.603
Total	0.90	1.96	2.02316	0.00484	0.13506	0.08	0.21362	0.03113	0.07	0.10561	0	432.4563	432.4563	0.0634	0.01507	438.5296

	ROG	NOx	Exhaust PM10	Exhaust PM2.5
Average Daily Emissions (lbs)	6.92	14.98	0.60	0.57

Construction Start Date	9/1/2023
Construction End Date	8/30/2024
Construction Work Days	261

Hexcel Redevelopment
Operational Emissions Summary
Proposed Project Emissions

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5707	3.00E-05	2.83E-03	0	0	1.00E-05	1.00E-05	0	1.00E-05	1.00E-05	0	5.52E-03	5.52E-03	1.00E-05	0	5.88E-03
Energy	0	0	0	0	0	0	0	0	0	0	0	111.9466	111.9466	0.0181	2.20E-03	113.0535
Mobile	0.1066	0.2351	1.3549	4.85E-03	0.5324	3.46E-03	0.5358	0.1422	3.23E-03	0.1455	0	448.1329	448.1329	0.0126	0.0199	454.3616
Stationary	7.18E-03	0.0201	0.0183	3.00E-05	0	1.06E-03	1.06E-03	0	1.06E-03	1.06E-03	0	3.332	3.332	4.70E-04	0	3.3437
Waste	0	0	0	0	0	0	0	0	0	0	26.0945	0	26.0945	1.5421	0	64.648
Water	0	0	0	0	0	0	0	0	0	0	8.887	14.6592	23.5463	0.9152	0.0218	52.9335
Total	0.68448	0.25523	1.37603	0.00488	0.5324	0.00453	0.53687	0.1422	0.0043	0.14657	34.9815	578.07622	613.05782	2.48848	0.0439	688.34618

Existing Emissions

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2898	2.00E-05	1.87E-03	0	0	1.00E-05	1.00E-05	0	1.00E-05	1.00E-05	0	3.64E-03	3.64E-03	1.00E-05	0	3.87E-03
Energy	9.12E-03	0.0829	0.0696	5.00E-04	0	6.30E-03	6.30E-03	0	6.30E-03	6.30E-03	0	140.4201	140.4201	9.85E-03	2.64E-03	141.4526
Mobile	0.3079	0.3914	2.9138	6.27E-03	0.6425	4.70E-03	0.6472	0.1716	4.38E-03	0.176	0	579.0834	579.0834	0.0368	0.0299	588.9222
Waste	0	0	0	0	0	0	0	0	0	0	0.9683	0	0.9683	0.0572	0	2.3988
Water	0	0	0	0	0	0	0	0	0	0	9.7838	15.4395	25.2233	1.0074	0.024	57.569
Total	0.60682	0.47432	2.98527	0.00677	0.6425	0.01101	0.65351	0.1716	0.01069	0.18231	10.7521	734.94664	745.69874	1.11126	0.05654	790.34647

	ROG	NOx	PM10 Total	PM2.5 Total
Proposed Project Annual Emissions (tons)	0.68	0.26	0.54	0.15
Existing Emissions (tons)	0.61	0.47	0.65	0.18
Net Emissions (tons)	0.08	-0.22	-0.12	-0.04
Average Daily Emissions (lbs)	0.60	-1.69	-0.90	-0.27

Working Days per Year 260

GHG Emissions Summary	MT CO2e
Total Construction	439
Amortized Construction	15
Area	0
Energy	113
Mobile	454
Stationary	3
Waste	65
Water	53
Total Annual Emissions	703
Existing Emission	790
Net Emissions	-87

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Hexcel Redevelopment Project

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	12.00	1000sqft	0.28	12,000.00	0
General Office Building	6.00	1000sqft	0.14	6,000.00	0
General Light Industry	36.50	1000sqft	0.84	36,500.00	0
Unrefrigerated Warehouse-No Rail	70.80	1000sqft	3.33	70,804.00	0
Other Non-Asphalt Surfaces	99.11	1000sqft	2.28	99,106.00	0
Parking Lot	84.52	1000sqft	1.94	84,515.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project specific land uses, square footages on 8.81-acre site.

Construction Phase - Project specific construction schedule

Off-road Equipment - Project specific construction equipment.

Off-road Equipment - Project specific construction equipment.

Off-road Equipment - Project specific equipment

Off-road Equipment - Project specific construction equipment.

Hexcel Redevelopment Project - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Project specific construction equipment.

Off-road Equipment - Project specific construction equipment.

Trips and VMT - Vendor trips during demolition and grading to account for water truck trips. Demolition-related haul truck trips based on 20CY-trucks and 12,170 CY of demo debris. Grading haul trucks based on 200 CY material import, if needed.

Demolition - Square footage of existing building

Grading - Material cut/fill anticipated to balance.

Vehicle Trips - Trip rate based on Final TIS for the project (W-Trans 2022).

Construction Off-road Equipment Mitigation - Implementation of BAAQMD BMPs.

Fleet Mix - LDA, LDT1, LDT2, MCY, HHD, LHD1, and LHD2 left as default fleet percentages; added OBUS, UBUS, SBUS, MCY, and MH to MDV category to account for 20% max trucks.

Stationary Sources - Emergency Generators and Fire Pumps -

Energy Use - Project would comply with City of Dublin Code: DMC Chapter 7.94.100 for commercial buildings - no natural gas infrastructure.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	230.00	107.00
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	20.00	34.00
tblEnergyUse	NT24E	3.36	5.56
tblEnergyUse	NT24E	4.80	5.12
tblEnergyUse	NT24E	1.38	1.45
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	NT24NG	1.01	0.00
tblEnergyUse	NT24NG	0.21	0.00
tblEnergyUse	T24E	1.08	6.70
tblEnergyUse	T24E	3.66	9.43
tblEnergyUse	T24E	0.21	0.58
tblEnergyUse	T24NG	17.67	0.00
tblEnergyUse	T24NG	18.14	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblEnergyUse	T24NG	1.17	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.11	0.14
tblFleetMix	MH	2.4230e-003	0.00
tblFleetMix	OBUS	7.9000e-004	0.00
tblFleetMix	SBUS	3.4300e-004	0.00
tblFleetMix	UBUS	5.6000e-004	0.00
tblGrading	AcresOfGrading	36.75	20.00
tblGrading	MaterialExported	0.00	7,000.00
tblGrading	MaterialImported	0.00	6,800.00
tblLandUse	LandUseSquareFeet	70,800.00	70,804.00
tblLandUse	LandUseSquareFeet	99,110.00	99,106.00
tblLandUse	LandUseSquareFeet	84,520.00	84,515.00
tblLandUse	LotAcreage	1.63	3.33
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripNumber	285.00	1,217.00
tblTripsAndVMT	HaulingTripNumber	1,725.00	25.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblVehicleTrips	ST_TR	1.99	13.53
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	5.00	13.53
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	4.96	13.53
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0871	0.9176	0.6754	1.8100e-003	0.0584	0.0371	0.0956	0.0104	0.0348	0.0451	0.0000	162.3278	162.3278	0.0315	6.0800e-003	164.9265
2024	0.8163	1.0374	1.3478	3.0400e-003	0.0766	0.0414	0.1179	0.0208	0.0396	0.0604	0.0000	270.1284	270.1284	0.0319	8.9800e-003	273.6029
Maximum	**0.8163**	**1.0374**	**1.3478**	**3.0400e-003**	**0.0766**	**0.0414**	**0.1179**	**0.0208**	**0.0396**	**0.0604**	**0.0000**	**270.1284**	**270.1284**	**0.0319**	**8.9800e-003**	**273.6029**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0871	0.9176	0.6754	1.8100e-003	0.0352	0.0371	0.0723	7.0900e-003	0.0348	0.0419	0.0000	162.3277	162.3277	0.0315	6.0800e-003	164.9263
2024	0.8163	1.0374	1.3478	3.0400e-003	0.0766	0.0414	0.1179	0.0208	0.0396	0.0604	0.0000	270.1282	270.1282	0.0319	8.9800e-003	273.6027
Maximum	**0.8163**	**1.0374**	**1.3478**	**3.0400e-003**	**0.0766**	**0.0414**	**0.1179**	**0.0208**	**0.0396**	**0.0604**	**0.0000**	**270.1282**	**270.1282**	**0.0319**	**8.9800e-003**	**273.6027**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**17.22**	**0.00**	**10.89**	**10.47**	**0.00**	**3.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2023**	**11-30-2023**	0.7872	0.7872
2	**12-1-2023**	**2-29-2024**	0.4353	0.4353
3	**3-1-2024**	**5-31-2024**	0.5942	0.5942
4	**6-1-2024**	**8-31-2024**	1.0085	1.0085
		Highest	1.0085	1.0085

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5707	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.5200e-003	5.5200e-003	1.0000e-005	0.0000	5.8800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	111.9466	111.9466	0.0181	2.2000e-003	113.0535
Mobile	0.1066	0.2351	1.3549	4.8500e-003	0.5324	3.4600e-003	0.5358	0.1422	3.2300e-003	0.1455	0.0000	448.1329	448.1329	0.0126	0.0199	454.3616
Stationary	7.1800e-003	0.0201	0.0183	3.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	3.3320	3.3320	4.7000e-004	0.0000	3.3437
Waste						0.0000	0.0000		0.0000	0.0000	26.0945	0.0000	26.0945	1.5421	0.0000	64.6480
Water						0.0000	0.0000		0.0000	0.0000	8.8870	14.6592	23.5463	0.9152	0.0218	52.9335
Total	**0.6845**	**0.2552**	**1.3760**	**4.8800e-003**	**0.5324**	**4.5300e-003**	**0.5369**	**0.1422**	**4.3000e-003**	**0.1465**	**34.9815**	**578.0762**	**613.0577**	**2.4884**	**0.0439**	**688.3461**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5707	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.5200e-003	5.5200e-003	1.0000e-005	0.0000	5.8800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	111.9466	111.9466	0.0181	2.2000e-003	113.0535
Mobile	0.1066	0.2351	1.3549	4.8500e-003	0.5324	3.4600e-003	0.5358	0.1422	3.2300e-003	0.1455	0.0000	448.1329	448.1329	0.0126	0.0199	454.3616
Stationary	7.1800e-003	0.0201	0.0183	3.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	3.3320	3.3320	4.7000e-004	0.0000	3.3437
Waste						0.0000	0.0000		0.0000	0.0000	26.0945	0.0000	26.0945	1.5421	0.0000	64.6480
Water						0.0000	0.0000		0.0000	0.0000	8.8870	14.6592	23.5463	0.9152	0.0218	52.9335
Total	**0.6845**	**0.2552**	**1.3760**	**4.8800e-003**	**0.5324**	**4.5300e-003**	**0.5369**	**0.1422**	**4.3000e-003**	**0.1465**	**34.9815**	**578.0762**	**613.0577**	**2.4884**	**0.0439**	**688.3461**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2023	11/30/2023	5	65	
2	Site Prep - Grading	Grading	12/1/2023	12/29/2023	5	21	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3	Trenching - Foundation	Trenching	1/1/2024	2/1/2024	5	24	
4	Building Construction Exterior	Building Construction	2/1/2024	6/28/2024	5	107	
5	Paving	Paving	7/1/2024	8/15/2024	5	34	
6	Building Interior - Architectural Coating	Architectural Coating	8/1/2024	8/30/2024	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20

Acres of Paving: 4.22

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 187,956; Non-Residential Outdoor: 62,652; Striped Parking Area: 11,017 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	7.00	81	0.73
Demolition	Excavators	1	7.00	158	0.38
Demolition	Rubber Tired Dozers	2	7.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Prep - Grading	Excavators	1	7.00	158	0.38
Site Prep - Grading	Graders	4	7.00	187	0.41
Site Prep - Grading	Rubber Tired Dozers	0	0.00	247	0.40
Site Prep - Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction Exterior	Cranes	1	7.00	231	0.29
Building Construction Exterior	Forklifts	2	7.00	89	0.20
Building Construction Exterior	Generator Sets	3	7.00	84	0.74
Building Construction Exterior	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction Exterior	Welders	1	7.00	46	0.45
Paving	Cement and Mortar Mixers	1	7.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	1	7.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Interior - Architectural Coating	Aerial Lifts	2	7.00	63	0.31
Building Interior - Architectural Coating	Air Compressors	2	7.00	78	0.48
Trenching - Foundation	Excavators	1	7.00	158	0.38
Trenching - Foundation	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	2.00	1,217.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep - Grading	6	15.00	2.00	25.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction Exterior	8	128.00	51.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Interior - Architectural Coating	4	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching - Foundation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0309	0.0000	0.0309	4.6700e-003	0.0000	4.6700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0670	0.6338	0.5317	1.0600e-003		0.0296	0.0296		0.0278	0.0278	0.0000	92.8197	92.8197	0.0216	0.0000	93.3606
Total	**0.0670**	**0.6338**	**0.5317**	**1.0600e-003**	**0.0309**	**0.0296**	**0.0604**	**4.6700e-003**	**0.0278**	**0.0324**	**0.0000**	**92.8197**	**92.8197**	**0.0216**	**0.0000**	**93.3606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2600e-003	0.0800	0.0181	3.6000e-004	0.0103	6.8000e-004	0.0110	2.8400e-003	6.5000e-004	3.4900e-003	0.0000	35.4570	35.4570	7.5000e-004	5.6000e-003	37.1452
Vendor	7.0000e-005	2.8400e-003	8.6000e-004	1.0000e-005	4.3000e-004	2.0000e-005	4.4000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.2574	1.2574	2.0000e-005	1.9000e-004	1.3139
Worker	1.2700e-003	8.7000e-004	0.0108	3.0000e-005	3.8500e-003	2.0000e-005	3.8700e-003	1.0300e-003	2.0000e-005	1.0400e-003	0.0000	3.0013	3.0013	9.0000e-005	8.0000e-005	3.0287
Total	**2.6000e-003**	**0.0837**	**0.0298**	**4.0000e-004**	**0.0146**	**7.2000e-004**	**0.0153**	**3.9900e-003**	**6.9000e-004**	**4.6700e-003**	**0.0000**	**39.7156**	**39.7156**	**8.6000e-004**	**5.8700e-003**	**41.4877**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0139	0.0000	0.0139	2.1000e-003	0.0000	2.1000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0670	0.6338	0.5317	1.0600e-003		0.0296	0.0296		0.0278	0.0278	0.0000	92.8196	92.8196	0.0216	0.0000	93.3605
Total	**0.0670**	**0.6338**	**0.5317**	**1.0600e-003**	**0.0139**	**0.0296**	**0.0434**	**2.1000e-003**	**0.0278**	**0.0299**	**0.0000**	**92.8196**	**92.8196**	**0.0216**	**0.0000**	**93.3605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2600e-003	0.0800	0.0181	3.6000e-004	0.0103	6.8000e-004	0.0110	2.8400e-003	6.5000e-004	3.4900e-003	0.0000	35.4570	35.4570	7.5000e-004	5.6000e-003	37.1452
Vendor	7.0000e-005	2.8400e-003	8.6000e-004	1.0000e-005	4.3000e-004	2.0000e-005	4.4000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.2574	1.2574	2.0000e-005	1.9000e-004	1.3139
Worker	1.2700e-003	8.7000e-004	0.0108	3.0000e-005	3.8500e-003	2.0000e-005	3.8700e-003	1.0300e-003	2.0000e-005	1.0400e-003	0.0000	3.0013	3.0013	9.0000e-005	8.0000e-005	3.0287
Total	**2.6000e-003**	**0.0837**	**0.0298**	**4.0000e-004**	**0.0146**	**7.2000e-004**	**0.0153**	**3.9900e-003**	**6.9000e-004**	**4.6700e-003**	**0.0000**	**39.7156**	**39.7156**	**8.6000e-004**	**5.8700e-003**	**41.4877**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Prep - Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0114	0.0000	0.0114	1.2600e-003	0.0000	1.2600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1973	0.1097	3.2000e-004		6.8300e-003	6.8300e-003		6.2900e-003	6.2900e-003	0.0000	27.6882	27.6882	8.9500e-003	0.0000	27.9121
Total	**0.0170**	**0.1973**	**0.1097**	**3.2000e-004**	**0.0114**	**6.8300e-003**	**0.0182**	**1.2600e-003**	**6.2900e-003**	**7.5500e-003**	**0.0000**	**27.6882**	**27.6882**	**8.9500e-003**	**0.0000**	**27.9121**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.6400e-003	3.7000e-004	1.0000e-005	2.1000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.7284	0.7284	2.0000e-005	1.2000e-004	0.7631
Vendor	2.0000e-005	9.2000e-004	2.8000e-004	0.0000	1.4000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.4062	0.4062	1.0000e-005	6.0000e-005	0.4245
Worker	4.1000e-004	2.8000e-004	3.5000e-003	1.0000e-005	1.2500e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	0.9696	0.9696	3.0000e-005	3.0000e-005	0.9785
Total	**4.6000e-004**	**2.8400e-003**	**4.1500e-003**	**2.0000e-005**	**1.6000e-003**	**3.0000e-005**	**1.6200e-003**	**4.3000e-004**	**3.0000e-005**	**4.6000e-004**	**0.0000**	**2.1042**	**2.1042**	**6.0000e-005**	**2.1000e-004**	**2.1660**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Prep - Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.1200e-003	0.0000	5.1200e-003	5.7000e-004	0.0000	5.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1973	0.1097	3.2000e-004		6.8300e-003	6.8300e-003		6.2900e-003	6.2900e-003	0.0000	27.6882	27.6882	8.9500e-003	0.0000	27.9121
Total	**0.0170**	**0.1973**	**0.1097**	**3.2000e-004**	**5.1200e-003**	**6.8300e-003**	**0.0120**	**5.7000e-004**	**6.2900e-003**	**6.8600e-003**	**0.0000**	**27.6882**	**27.6882**	**8.9500e-003**	**0.0000**	**27.9121**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.6400e-003	3.7000e-004	1.0000e-005	2.1000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.7284	0.7284	2.0000e-005	1.2000e-004	0.7631
Vendor	2.0000e-005	9.2000e-004	2.8000e-004	0.0000	1.4000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.4062	0.4062	1.0000e-005	6.0000e-005	0.4245
Worker	4.1000e-004	2.8000e-004	3.5000e-003	1.0000e-005	1.2500e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	0.9696	0.9696	3.0000e-005	3.0000e-005	0.9785
Total	**4.6000e-004**	**2.8400e-003**	**4.1500e-003**	**2.0000e-005**	**1.6000e-003**	**3.0000e-005**	**1.6200e-003**	**4.3000e-004**	**3.0000e-005**	**4.6000e-004**	**0.0000**	**2.1042**	**2.1042**	**6.0000e-005**	**2.1000e-004**	**2.1660**

Hexcel Redevelopment Project - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Trenching - Foundation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0299	0.0578	9.0000e-005		1.4200e-003	1.4200e-003		1.3100e-003	1.3100e-003	0.0000	7.6397	7.6397	2.4700e-003	0.0000	7.7015
Total	**3.4000e-003**	**0.0299**	**0.0578**	**9.0000e-005**		**1.4200e-003**	**1.4200e-003**		**1.3100e-003**	**1.3100e-003**	**0.0000**	**7.6397**	**7.6397**	**2.4700e-003**	**0.0000**	**7.7015**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.2400e-003	0.0000	4.7000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3574	0.3574	1.0000e-005	1.0000e-005	0.3606
Total	**1.5000e-004**	**1.0000e-004**	**1.2400e-003**	**0.0000**	**4.7000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3574**	**0.3574**	**1.0000e-005**	**1.0000e-005**	**0.3606**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Trenching - Foundation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0299	0.0578	9.0000e-005		1.4200e-003	1.4200e-003		1.3100e-003	1.3100e-003	0.0000	7.6397	7.6397	2.4700e-003	0.0000	7.7015
Total	**3.4000e-003**	**0.0299**	**0.0578**	**9.0000e-005**		**1.4200e-003**	**1.4200e-003**		**1.3100e-003**	**1.3100e-003**	**0.0000**	**7.6397**	**7.6397**	**2.4700e-003**	**0.0000**	**7.7015**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.2400e-003	0.0000	4.7000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3574	0.3574	1.0000e-005	1.0000e-005	0.3606
Total	**1.5000e-004**	**1.0000e-004**	**1.2400e-003**	**0.0000**	**4.7000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3574**	**0.3574**	**1.0000e-005**	**1.0000e-005**	**0.3606**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction Exterior - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0822	0.7366	0.8868	1.6000e-003		0.0325	0.0325		0.0313	0.0313	0.0000	137.3069	137.3069	0.0200	0.0000	137.8069
Total	**0.0822**	**0.7366**	**0.8868**	**1.6000e-003**		**0.0325**	**0.0325**		**0.0313**	**0.0313**	**0.0000**	**137.3069**	**137.3069**	**0.0200**	**0.0000**	**137.8069**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6900e-003	0.1198	0.0354	5.4000e-004	0.0179	7.3000e-004	0.0187	5.1900e-003	7.0000e-004	5.8800e-003	0.0000	51.9666	51.9666	7.2000e-004	7.7900e-003	54.3048
Worker	0.0167	0.0110	0.1420	4.4000e-004	0.0542	2.7000e-004	0.0544	0.0144	2.5000e-004	0.0147	0.0000	40.7957	40.7957	1.1400e-003	1.1000e-003	41.1533
Total	**0.0194**	**0.1307**	**0.1774**	**9.8000e-004**	**0.0721**	**1.0000e-003**	**0.0731**	**0.0196**	**9.5000e-004**	**0.0205**	**0.0000**	**92.7622**	**92.7622**	**1.8600e-003**	**8.8900e-003**	**95.4581**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction Exterior - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0822	0.7366	0.8868	1.6000e-003		0.0325	0.0325		0.0313	0.0313	0.0000	137.3068	137.3068	0.0200	0.0000	137.8067
Total	**0.0822**	**0.7366**	**0.8868**	**1.6000e-003**		**0.0325**	**0.0325**		**0.0313**	**0.0313**	**0.0000**	**137.3068**	**137.3068**	**0.0200**	**0.0000**	**137.8067**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6900e-003	0.1198	0.0354	5.4000e-004	0.0179	7.3000e-004	0.0187	5.1900e-003	7.0000e-004	5.8800e-003	0.0000	51.9666	51.9666	7.2000e-004	7.7900e-003	54.3048
Worker	0.0167	0.0110	0.1420	4.4000e-004	0.0542	2.7000e-004	0.0544	0.0144	2.5000e-004	0.0147	0.0000	40.7957	40.7957	1.1400e-003	1.1000e-003	41.1533
Total	**0.0194**	**0.1307**	**0.1774**	**9.8000e-004**	**0.0721**	**1.0000e-003**	**0.0731**	**0.0196**	**9.5000e-004**	**0.0205**	**0.0000**	**92.7622**	**92.7622**	**1.8600e-003**	**8.8900e-003**	**95.4581**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.0979	0.1466	2.3000e-004		4.6900e-003	4.6900e-003		4.3300e-003	4.3300e-003	0.0000	19.6486	19.6486	6.2100e-003	0.0000	19.8037
Paving	2.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0129**	**0.0979**	**0.1466**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3300e-003**	**4.3300e-003**	**0.0000**	**19.6486**	**19.6486**	**6.2100e-003**	**0.0000**	**19.8037**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.5000e-004	4.5800e-003	1.0000e-005	1.7500e-003	1.0000e-005	1.7600e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.3166	1.3166	4.0000e-005	4.0000e-005	1.3281
Total	**5.4000e-004**	**3.5000e-004**	**4.5800e-003**	**1.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7600e-003**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**	**0.0000**	**1.3166**	**1.3166**	**4.0000e-005**	**4.0000e-005**	**1.3281**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.0979	0.1466	2.3000e-004		4.6900e-003	4.6900e-003		4.3300e-003	4.3300e-003	0.0000	19.6486	19.6486	6.2100e-003	0.0000	19.8037
Paving	2.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0129**	**0.0979**	**0.1466**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3300e-003**	**4.3300e-003**	**0.0000**	**19.6486**	**19.6486**	**6.2100e-003**	**0.0000**	**19.8037**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.5000e-004	4.5800e-003	1.0000e-005	1.7500e-003	1.0000e-005	1.7600e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.3166	1.3166	4.0000e-005	4.0000e-005	1.3281
Total	**5.4000e-004**	**3.5000e-004**	**4.5800e-003**	**1.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7600e-003**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**	**0.0000**	**1.3166**	**1.3166**	**4.0000e-005**	**4.0000e-005**	**1.3281**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Building Interior - Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6917					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3100e-003	0.0414	0.0675	1.1000e-004		1.7400e-003	1.7400e-003		1.7300e-003	1.7300e-003	0.0000	9.3932	9.3932	1.2900e-003	0.0000	9.4254
Total	**0.6970**	**0.0414**	**0.0675**	**1.1000e-004**		**1.7400e-003**	**1.7400e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**9.3932**	**9.3932**	**1.2900e-003**	**0.0000**	**9.4254**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	4.6000e-004	5.9300e-003	2.0000e-005	2.2600e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7038	1.7038	5.0000e-005	5.0000e-005	1.7187
Total	**7.0000e-004**	**4.6000e-004**	**5.9300e-003**	**2.0000e-005**	**2.2600e-003**	**1.0000e-005**	**2.2700e-003**	**6.0000e-004**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**1.7038**	**1.7038**	**5.0000e-005**	**5.0000e-005**	**1.7187**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Building Interior - Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6917					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3100e-003	0.0414	0.0675	1.1000e-004		1.7400e-003	1.7400e-003		1.7300e-003	1.7300e-003	0.0000	9.3932	9.3932	1.2900e-003	0.0000	9.4254
Total	**0.6970**	**0.0414**	**0.0675**	**1.1000e-004**		**1.7400e-003**	**1.7400e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**9.3932**	**9.3932**	**1.2900e-003**	**0.0000**	**9.4254**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	4.6000e-004	5.9300e-003	2.0000e-005	2.2600e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7038	1.7038	5.0000e-005	5.0000e-005	1.7187
Total	**7.0000e-004**	**4.6000e-004**	**5.9300e-003**	**2.0000e-005**	**2.2600e-003**	**1.0000e-005**	**2.2700e-003**	**6.0000e-004**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**1.7038**	**1.7038**	**5.0000e-005**	**5.0000e-005**	**1.7187**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1066	0.2351	1.3549	4.8500e-003	0.5324	3.4600e-003	0.5358	0.1422	3.2300e-003	0.1455	0.0000	448.1329	448.1329	0.0126	0.0199	454.3616
Unmitigated	0.1066	0.2351	1.3549	4.8500e-003	0.5324	3.4600e-003	0.5358	0.1422	3.2300e-003	0.1455	0.0000	448.1329	448.1329	0.0126	0.0199	454.3616

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	494.00	494.00	494.00	1,442,239	1,442,239
General Office Building	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	494.00	494.00	494.00	1,442,239	1,442,239

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.570753	0.056481	0.179220	0.140534	0.020784	0.005211	0.013984	0.013033	0.000000	0.000000	0.000000	0.000000	0.000000
General Office Building	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Other Non-Asphalt Surfaces	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Parking Lot	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Unrefrigerated Warehouse-No Rail	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Hexcel Redevelopment Project - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.9466	111.9466	0.0181	2.2000e-003	113.0535
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.9466	111.9466	0.0181	2.2000e-003	113.0535
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	556625	51.5010	8.3300e-003	1.0100e-003	52.0103
General Office Building	108780	10.0647	1.6300e-003	2.0000e-004	10.1643
General Office Building	217560	20.1295	3.2600e-003	3.9000e-004	20.3285
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	29580.2	2.7369	4.4000e-004	5.0000e-005	2.7639
Unrefrigerated Warehouse-No Rail	297377	27.5144	4.4500e-003	5.4000e-004	27.7865
Total		**111.9466**	**0.0181**	**2.1900e-003**	**113.0535**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	556625	51.5010	8.3300e-003	1.0100e-003	52.0103
General Office Building	108780	10.0647	1.6300e-003	2.0000e-004	10.1643
General Office Building	217560	20.1295	3.2600e-003	3.9000e-004	20.3285
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	29580.2	2.7369	4.4000e-004	5.0000e-005	2.7639
Unrefrigerated Warehouse-No Rail	297377	27.5144	4.4500e-003	5.4000e-004	27.7865
Total		**111.9466**	**0.0181**	**2.1900e-003**	**113.0535**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5707	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.5200e-003	5.5200e-003	1.0000e-005	0.0000	5.8800e-003
Unmitigated	0.5707	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.5200e-003	5.5200e-003	1.0000e-005	0.0000	5.8800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.5200e-003	5.5200e-003	1.0000e-005	0.0000	5.8800e-003
Total	**0.5707**	**3.0000e-005**	**2.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.5200e-003**	**5.5200e-003**	**1.0000e-005**	**0.0000**	**5.8800e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.5200e-003	5.5200e-003	1.0000e-005	0.0000	5.8800e-003
Total	**0.5707**	**3.0000e-005**	**2.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.5200e-003**	**5.5200e-003**	**1.0000e-005**	**0.0000**	**5.8800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	23.5463	0.9152	0.0218	52.9335
Unmitigated	23.5463	0.9152	0.0218	52.9335

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	8.44063 / 0	6.9036	0.2757	6.5800e-003	15.7566
General Office Building	3.19921 / 1.9608	3.2516	0.1046	2.5100e-003	6.6134
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	16.3725 / 0	13.3911	0.5348	0.0128	30.5635
Total		**23.5463**	**0.9152**	**0.0219**	**52.9335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	8.44063 / 0	6.9036	0.2757	6.5800e-003	15.7566
General Office Building	3.19921 / 1.9608	3.2516	0.1046	2.5100e-003	6.6134
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	16.3725 / 0	13.3911	0.5348	0.0128	30.5635
Total		**23.5463**	**0.9152**	**0.0219**	**52.9335**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.0945	1.5421	0.0000	64.6480
Unmitigated	26.0945	1.5421	0.0000	64.6480

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	45.26	9.1874	0.5430	0.0000	22.7613
General Office Building	16.74	3.3981	0.2008	0.0000	8.4186
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	66.55	13.5091	0.7984	0.0000	33.4681
Total		**26.0945**	**1.5421**	**0.0000**	**64.6480**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	45.26	9.1874	0.5430	0.0000	22.7613
General Office Building	16.74	3.3981	0.2008	0.0000	8.4186
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	66.55	13.5091	0.7984	0.0000	33.4681
Total		**26.0945**	**1.5421**	**0.0000**	**64.6480**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Fire Pump	1	1	50	175	0.73	Diesel

Boilers

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Fire Pump - Diesel (175 - 300 HP)	7.1800e-003	0.0201	0.0183	3.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	3.3320	3.3320	4.7000e-004	0.0000	3.3437
Total	**7.1800e-003**	**0.0201**	**0.0183**	**3.0000e-005**		**1.0600e-003**	**1.0600e-003**		**1.0600e-003**	**1.0600e-003**	**0.0000**	**3.3320**	**3.3320**	**4.7000e-004**	**0.0000**	**3.3437**

11.0 Vegetation

Hexcel Redevelopment - Existing Operations - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Hexcel Redevelopment - Existing Operations

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	62.72	1000sqft	5.58	62,715.00	0
Other Non-Asphalt Surfaces	140.72	1000sqft	3.23	140,724.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Existing operations run only (2023).

Land Use - Based on existing land uses and 8.81-acre site.

Construction Phase - Operations only run - construction phases as placeholders.

Off-road Equipment - Operations only run.

Off-road Equipment - Operations only run.

Trips and VMT - Operations only run.

Architectural Coating - Operations only run.

Vehicle Trips - Trip rate based on Final TIS for project (W-Trans 2022).

Energy Use - The building was built in two phases dating 1962 and 1967 - use of historical data.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	31,358.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	94,073.00	0.00
tblArchitecturalCoating	ConstArea_Parking	8,443.00	0.00
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	4/25/2024	3/29/2024
tblConstructionPhase	PhaseEndDate	3/28/2024	3/1/2024
tblLandUse	LotAcreage	1.44	5.58
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	16.00	0.00
tblVehicleTrips	ST_TR	1.90	11.08
tblVehicleTrips	SU_TR	1.11	11.08
tblVehicleTrips	WD_TR	11.26	11.08

2.0 Emissions Summary

Hexcel Redevelopment - Existing Operations - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

Hexcel Redevelopment - Existing Operations - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2898	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6400e-003	3.6400e-003	1.0000e-005	0.0000	3.8700e-003
Energy	9.1200e-003	0.0829	0.0696	5.0000e-004		6.3000e-003	6.3000e-003		6.3000e-003	6.3000e-003	0.0000	140.4201	140.4201	9.8500e-003	2.6400e-003	141.4526
Mobile	0.3079	0.3914	2.9138	6.2700e-003	0.6425	4.7000e-003	0.6472	0.1716	4.3800e-003	0.1760	0.0000	579.0834	579.0834	0.0368	0.0299	588.9222
Waste						0.0000	0.0000		0.0000	0.0000	0.9683	0.0000	0.9683	0.0572	0.0000	2.3988
Water						0.0000	0.0000		0.0000	0.0000	9.7838	15.4395	25.2233	1.0074	0.0240	57.5690
Total	**0.6068**	**0.4743**	**2.9853**	**6.7700e-003**	**0.6425**	**0.0110**	**0.6535**	**0.1716**	**0.0107**	**0.1823**	**10.7521**	**734.9466**	**745.6987**	**1.1113**	**0.0566**	**790.3465**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2898	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6400e-003	3.6400e-003	1.0000e-005	0.0000	3.8700e-003
Energy	9.1200e-003	0.0829	0.0696	5.0000e-004		6.3000e-003	6.3000e-003		6.3000e-003	6.3000e-003	0.0000	140.4201	140.4201	9.8500e-003	2.6400e-003	141.4526
Mobile	0.3079	0.3914	2.9138	6.2700e-003	0.6425	4.7000e-003	0.6472	0.1716	4.3800e-003	0.1760	0.0000	579.0834	579.0834	0.0368	0.0299	588.9222
Waste						0.0000	0.0000		0.0000	0.0000	0.9683	0.0000	0.9683	0.0572	0.0000	2.3988
Water						0.0000	0.0000		0.0000	0.0000	9.7838	15.4395	25.2233	1.0074	0.0240	57.5690
Total	**0.6068**	**0.4743**	**2.9853**	**6.7700e-003**	**0.6425**	**0.0110**	**0.6535**	**0.1716**	**0.0107**	**0.1823**	**10.7521**	**734.9466**	**745.6987**	**1.1113**	**0.0566**	**790.3465**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Paving	Paving	3/1/2024	3/1/2024	5	1	
2	Architectural Coating	Architectural Coating	3/29/2024	3/29/2024	5	1	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.23

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	0	0.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Hexcel Redevelopment - Existing Operations - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3079	0.3914	2.9138	6.2700e-003	0.6425	4.7000e-003	0.6472	0.1716	4.3800e-003	0.1760	0.0000	579.0834	579.0834	0.0368	0.0299	588.9222
Unmitigated	0.3079	0.3914	2.9138	6.2700e-003	0.6425	4.7000e-003	0.6472	0.1716	4.3800e-003	0.1760	0.0000	579.0834	579.0834	0.0368	0.0299	588.9222

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Research & Development	695.00	695.00	695.00	1,741,842	1,741,842
Total	695.00	695.00	695.00	1,741,842	1,741,842

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.569121	0.056513	0.180870	0.112593	0.021111	0.005121	0.013190	0.012692	0.000800	0.000580	0.024593	0.000331	0.002484
Research & Development	0.569121	0.056513	0.180870	0.112593	0.021111	0.005121	0.013190	0.012692	0.000800	0.000580	0.024593	0.000331	0.002484

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	50.1927	50.1927	8.1200e-003	9.8000e-004	50.6891
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	50.1927	50.1927	8.1200e-003	9.8000e-004	50.6891
NaturalGas Mitigated	9.1200e-003	0.0829	0.0696	5.0000e-004		6.3000e-003	6.3000e-003		6.3000e-003	6.3000e-003	0.0000	90.2273	90.2273	1.7300e-003	1.6500e-003	90.7635
NaturalGas Unmitigated	9.1200e-003	0.0829	0.0696	5.0000e-004		6.3000e-003	6.3000e-003		6.3000e-003	6.3000e-003	0.0000	90.2273	90.2273	1.7300e-003	1.6500e-003	90.7635

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.6908e+006	9.1200e-003	0.0829	0.0696	5.0000e-004		6.3000e-003	6.3000e-003		6.3000e-003	6.3000e-003	0.0000	90.2273	90.2273	1.7300e-003	1.6500e-003	90.7635
Total		**9.1200e-003**	**0.0829**	**0.0696**	**5.0000e-004**		**6.3000e-003**	**6.3000e-003**		**6.3000e-003**	**6.3000e-003**	**0.0000**	**90.2273**	**90.2273**	**1.7300e-003**	**1.6500e-003**	**90.7635**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.6908e+006	9.1200e-003	0.0829	0.0696	5.0000e-004		6.3000e-003	6.3000e-003		6.3000e-003	6.3000e-003	0.0000	90.2273	90.2273	1.7300e-003	1.6500e-003	90.7635
Total		**9.1200e-003**	**0.0829**	**0.0696**	**5.0000e-004**		**6.3000e-003**	**6.3000e-003**		**6.3000e-003**	**6.3000e-003**	**0.0000**	**90.2273**	**90.2273**	**1.7300e-003**	**1.6500e-003**	**90.7635**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	542485	50.1927	8.1200e-003	9.8000e-004	50.6891
Total		**50.1927**	**8.1200e-003**	**9.8000e-004**	**50.6891**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	542485	50.1927	8.1200e-003	9.8000e-004	50.6891
Total		**50.1927**	**8.1200e-003**	**9.8000e-004**	**50.6891**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2898	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6400e-003	3.6400e-003	1.0000e-005	0.0000	3.8700e-003
Unmitigated	0.2898	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6400e-003	3.6400e-003	1.0000e-005	0.0000	3.8700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0356					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2540					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6400e-003	3.6400e-003	1.0000e-005	0.0000	3.8700e-003
Total	**0.2898**	**2.0000e-005**	**1.8700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6400e-003**	**3.6400e-003**	**1.0000e-005**	**0.0000**	**3.8700e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0356					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2540					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6400e-003	3.6400e-003	1.0000e-005	0.0000	3.8700e-003
Total	**0.2898**	**2.0000e-005**	**1.8700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6400e-003**	**3.6400e-003**	**1.0000e-005**	**0.0000**	**3.8700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	25.2233	1.0074	0.0240	57.5690
Unmitigated	25.2233	1.0074	0.0240	57.5690

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	30.839 / 0	25.2233	1.0074	0.0240	57.5690
Total		**25.2233**	**1.0074**	**0.0240**	**57.5690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	30.839 / 0	25.2233	1.0074	0.0240	57.5690
Total		**25.2233**	**1.0074**	**0.0240**	**57.5690**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.9683	0.0572	0.0000	2.3988
Unmitigated	0.9683	0.0572	0.0000	2.3988

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	4.77	0.9683	0.0572	0.0000	2.3988
Total		**0.9683**	**0.0572**	**0.0000**	**2.3988**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	4.77	0.9683	0.0572	0.0000	2.3988
Total		**0.9683**	**0.0572**	**0.0000**	**2.3988**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Energy Consumption Summary

Proposed Project Energy Consumption Summary			
Source	Energy Requirement	Unit	Annual Energy Consumption (MMBtu)
Construction[1] (amortized over project lifetime)			
Diesel	1,278	Gallons/yr	176
Gasoline	201	Gallons/yr	25
		Subtotal	*202*
Building Operations[2]			
Electrical	1,209,922	KWh/yr	4,128
Natural Gas	-	kBTU/yr	-
		Subtotal	*4,128*
Operational Transportation[3]			
Electricity	32,528	KWh/yr	111
Diesel	6,174	Gallons/yr	852
Gasoline	49,324	Gallons/yr	6,166
		Subtotal	*7,128*
		Total	*11,458*

Notes:

Totals may not add due to rounding.

Source: Modeled by AECOM in 2023

1. Construction estimates are based on conversion for CO_2 emissions estimates from CalEEMod to fuel consumption for diesel and gasoline-powered vehicles using U.S. Energy Information Administration 2022 factors.
2. Building operation energy consumption is based on estimated electricity demand from CalEEMod. No natural gas infrastructure in compliance with City code.
3. Operational transportation fuel consumption reflects CalEEMod VMT estimate, which incorporates trip generation data provided by TIA for the Project.

Existing Energy Consumption Summary			
Source	Energy Requirement	Unit	Annual Energy Consumption (MMBtu)
Building Operations[1]			
Electrical	542,485	KWh/yr	1,851
Natural Gas	1,690,800	kBTU/yr	1,691
		Subtotal	*3,542*
Operational Transportation[2]			
Electricity	35,002	KWh/yr	-
Diesel	7,876	Gallons/yr	1,087
Gasoline	60,858	Gallons/yr	7,607
		Subtotal	*8,694*
		Total	*12,236*

Notes:

Totals may not add due to rounding.

Source: Modeled by AECOM in 2023

1. Building operation energy consumption is based on estimated electricity and natural gas demand from CalEEMod.
2. Operational transportation fuel consumption reflects CalEEMod VMT estimate, which incorporates trip generation data provided by TIA for existing conditions.

Net Energy Consumption Summary	Annual Energy Consumption (MMBtu)
Proposed Project - Existing Conditions	(778)

Conversion Factors		
Category	Amount	Units
Diesel (heat content)	0.138	MMBtu/gallon
Motor Gasoline	0.125	MMBtu/gallon
Natural Gas	0.1	MMBtu/therm
Btu per kWh	3,412	Btu/kWh
Gallons per Barrel	42	gallons/barrel

https://theclimateregistry.org/wp-content/uploads/2022/11/2022-Default-Emission-Factors-Final.pdf

Construction Energy Summary

Source	MT CO_2 [a]	Fuel Type	Emission Factor (lb CO_2/gallon) [b]	Gallons
Off-Road	294.50	Diesel	22.45	29,384
Hauling	36.19	Diesel	22.45	3,610
Vendor	53.63	Diesel	22.45	5,351
Worker	48.14	Gas	17.86	6,038
	Total Demand		Diesel	38,346
			Gasoline	6,038

Sources:

[a] Modeled by AECOM in 2023.

[b] U.S. Energy Information Administration released October 5, 2022 (https://www.eia.gov/environment/emissions/co2_vol_mass.php)

Project Operational Transportation Energy Consumption

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Alameda
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	% VMT	EVMT	Fuel Consumption	Fuel Consumption / Mile	Energy Consumption	Energy Consumption / Mile
Alameda	2025	LDA	Aggregate	Aggregate	Gasoline	546668.9721	19880452.29	87.11%	0	647.7239298	0.033	0	
Alameda	2025	LDA	Aggregate	Aggregate	Diesel	2039.963989	55387.87268	0.24%	0	1.286060647	0.023	0	
Alameda	2025	LDA	Aggregate	Aggregate	Electricity	47802.8263	2163781.86	9.48%	2163781.86	0	0.000	835398.3846	0.386
Alameda	2025	LDA	Aggregate	Aggregate	Plug-in Hybrid	16264.37604	723669.533	3.17%	372439.3749	11.58789112	0.016	112487.7917	0.302
Alameda	2025	LDT1	Aggregate	Aggregate	Gasoline	50229.43705	1681495.67	99.33%	0	65.43336139	0.039	0	
Alameda	2025	LDT1	Aggregate	Aggregate	Diesel	26.24074592	304.9619282	0.02%	0	0.012640983	0.041	0	
Alameda	2025	LDT1	Aggregate	Aggregate	Electricity	160.9168358	6850.144103	0.40%	6850.144103	0	0.000	2644.720997	0.386
Alameda	2025	LDT1	Aggregate	Aggregate	Plug-in Hybrid	82.97866268	4267.620687	0.25%	2415.775875	0.061175156	0.014	729.6363158	0.302
Alameda	2025	LDT2	Aggregate	Aggregate	Gasoline	253899.3877	9825879.725	97.95%	0	392.0663593	0.040	0	
Alameda	2025	LDT2	Aggregate	Aggregate	Diesel	901.8112024	35889.68271	0.36%	0	1.080479483	0.030	0	
Alameda	2025	LDT2	Aggregate	Aggregate	Electricity	1799.655866	63781.98114	0.64%	63781.98114	0	0.000	24625.10893	0.386
Alameda	2025	LDT2	Aggregate	Aggregate	Plug-in Hybrid	2164.722049	105553.5289	1.05%	57403.55065	1.597242423	0.015	17337.5832	0.302
Alameda	2025	LHDT1	Aggregate	Aggregate	Gasoline	18847.97703	718081.1534	65.01%	0	73.03897794	0.102	0	
Alameda	2025	LHDT1	Aggregate	Aggregate	Diesel	9347.769632	375050.1539	33.95%	0	23.37728263	0.062	0	
Alameda	2025	LHDT1	Aggregate	Aggregate	Electricity	166.1321894	11462.56249	1.04%	11462.56249	0	0.000	7505.609178	0.655
Alameda	2025	LHDT2	Aggregate	Aggregate	Gasoline	2642.532308	96603.42272	36.51%	0	11.12292477	0.115	0	
Alameda	2025	LHDT2	Aggregate	Aggregate	Diesel	4066.470296	165207.4735	62.43%	0	12.26873987	0.074	0	
Alameda	2025	LHDT2	Aggregate	Aggregate	Electricity	42.68505741	2798.596435	1.06%	2798.596435	0	0.000	1805.109406	0.645
Alameda	2025	MDV	Aggregate	Aggregate	Gasoline	136231.7095	5084190.809	96.18%	0	245.2316451	0.048	0	
Alameda	2025	MDV	Aggregate	Aggregate	Diesel	1904.613628	72630.04717	1.37%	0	2.880070264	0.040	0	
Alameda	2025	MDV	Aggregate	Aggregate	Electricity	1914.807931	68041.68751	1.29%	68041.68751	0	0.000	26269.70716	0.386
Alameda	2025	MDV	Aggregate	Aggregate	Plug-in Hybrid	1284.474187	61042.80887	1.15%	32932.52287	0.943867907	0.015	9946.603454	0.302
Alameda	2025	MHDT	Aggregate	Aggregate	Gasoline	1612.599975	84199.09574	12.05%	0	17.67484141	0.210	0	
Alameda	2025	MHDT	Aggregate	Aggregate	Diesel	14347.80967	601174.9321	86.02%	0	70.85659815	0.118	0	
Alameda	2025	MHDT	Aggregate	Aggregate	Electricity	114.3683345	5978.325429	0.86%	5978.325429	0	0.000	6537.593438	1.094
Alameda	2025	MHDT	Aggregate	Aggregate	Natural Gas	158.2385165	7563.711613	1.08%	0	1.058974684	0.140	0	
Alameda	2025	HHDT	Aggregate	Aggregate	Gasoline	6.587036146	866.5446439	0.05%	0	0.228404961	0.264	0	
Alameda	2025	HHDT	Aggregate	Aggregate	Diesel	14386.56788	1818729.408	95.47%	0	300.0761645	0.165	0	
Alameda	2025	HHDT	Aggregate	Aggregate	Electricity	90.78791991	10234.56318	0.54%	10234.56318	0	0.000	18807.06117	1.838
Alameda	2025	HHDT	Aggregate	Aggregate	Natural Gas	1088.373943	75208.5745	3.95%	0	14.27179323	0.190	0	

Proposed Project Fleet Mix	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD
General Light Industry	0.570753	0.056481	0.17922	0.140534	0.020784	0.005211	0.013984	0.013033

Total Annual VMT: 1,442,239

VMT by Fleet Category	Total	Diesel	Gasoline	Plug In Hybrid	Electricity	Natural Gas
LDA	823162.24	1997.66125	717023.5511	26100.41718	78040.60646	0
LDT1	81459.10	14.6740236	80909.46723	205.3474905	329.6122136	0
LDT2	258478.07	924.7930436	253189.9011	2719.867158	1643.51223	0
MDV	202683.62	2784.938356	194949.0403	2340.635404	2609.001546	0
LHD1	29975.50	10177.78069	19486.65377	0	311.0609232	0
LHD2	7515.51	4692.265504	2743.755464	0	79.48646169	0
MHD	20168.27	17347.80335	2429.691055	0	172.513537	218.2622306
HHD	18796.70	17945.09774	8.550050524	0	100.9827167	742.0703784

Percent Fuel Type by Fleet Category	Diesel	Gasoline	Plug In Hybrid	Electricity	Natural Gas	Total
LDA	0.24%	87.11%	3.17%	9.48%	0	100.00%
LDT1	0.02%	99.33%	0.25%	0.40%	0	100.00%
LDT2	0.36%	97.95%	1.05%	0.64%	0	100.00%
MDV	1.37%	96.18%	1.15%	1.29%	0	100.00%
LHD1	33.95%	65.01%	0.00%	1.04%	0	100.00%
LHD2	62.43%	36.51%	0.00%	1.06%	0	100.00%
MHD	86.02%	12.05%	0.00%	0.86%	1.08%	100.00%
HHD	95.47%	0.05%	0.00%	0.54%	3.95%	100.00%

Fuel Consumption (gallons for Diesel/Gas; kWh for Electricity)	Diesel	Gasoline	Plug In Hybrid	Electricity	Natural Gas
LDA	46.38404394	23361.30515	417.937717	30130.11513	0
LDT1	0.60825323	3148.493632	2.943599179	127.2575188	0
LDT2	27.84142501	10102.63157	41.15719533	634.5313672	0
MDV	110.4338832	9403.202135	36.19182473	1007.289929	0
LHD1	634.3921025	1982.067442	0	203.68061	0
LHD2	348.4599314	315.9161936	0	51.26918546	0
MHD	2044.673298	510.0340294	0	188.6520533	30.55830107
HHD	2960.801138	2.253633405	0	185.5661152	140.8173878

*Note that natural gas consumption is negligible an not accounted for in summary tab. Plug-in Hybrid is summed with Gasoline in Summary Tab.
Total Annual VMT is based on CalEEMod VMT estimate.
Grey highlighted columns indicated calculations using EMFAC data, not data output from EMFAC.

Exisiting Operational Transportation Energy Consumption

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Alameda
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	% VMT	Fuel Consumption	Fuel Consumption / Mile	EVMT	Energy Consumption	Energy Consumption / Mile
Alameda	2024	LDA	Aggregate	Aggregate	Gasoline	550051.9063	19996646.21	88.12%	665.3099768	0.033	0	0	
Alameda	2024	LDA	Aggregate	Aggregate	Diesel	2215.138833	61148.19519	0.27%	1.433471985	0.023	0	0	
Alameda	2024	LDA	Aggregate	Aggregate	Electricity	44261.68471	1965044.893	8.66%	0	0.000	1965044.893	758669.5128	0.386
Alameda	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	14910.86076	670426.3099	2.95%	10.98632777	0.016	337167.752	101834.7103	0.302
Alameda	2024	LDT1	Aggregate	Aggregate	Gasoline	51647.46173	1731568.48	99.49%	68.55514321	0.040	0	0	
Alameda	2024	LDT1	Aggregate	Aggregate	Diesel	28.93594781	345.6310163	0.02%	0.014338951	0.041	0	0	
Alameda	2024	LDT1	Aggregate	Aggregate	Electricity	139.313723	5582.724901	0.32%	0	0.000	5582.724901	2155.392579	0.386
Alameda	2024	LDT1	Aggregate	Aggregate	Plug-in Hybrid	57.17489905	2971.762703	0.17%	0.043848781	0.015	1643.451264	496.3712644	0.302
Alameda	2024	LDT2	Aggregate	Aggregate	Gasoline	250144.8178	9685168.656	98.26%	396.0221228	0.041	0	0	
Alameda	2024	LDT2	Aggregate	Aggregate	Diesel	877.4560623	35171.51513	0.36%	1.081943418	0.031	0	0	
Alameda	2024	LDT2	Aggregate	Aggregate	Electricity	1325.769916	47543.56893	0.48%	0	0.000	47543.56893	18355.74159	0.386
Alameda	2024	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1787.793858	88602.88431	0.90%	1.374664862	0.016	47120.1193	14231.68043	0.302
Alameda	2024	LHDT1	Aggregate	Aggregate	Gasoline	18902.95342	716627.0752	65.94%	74.1467641	0.103	0	0	
Alameda	2024	LHDT1	Aggregate	Aggregate	Diesel	9144.826182	365640.0278	33.65%	22.91149684	0.063	0	0	
Alameda	2024	LHDT1	Aggregate	Aggregate	Electricity	59.85101767	4446.696098	0.41%	0	0.000	4446.696098	2910.818763	0.655
Alameda	2024	LHDT2	Aggregate	Aggregate	Gasoline	2669.253287	97703.8855	37.79%	11.40931526	0.117	0	0	
Alameda	2024	LHDT2	Aggregate	Aggregate	Diesel	3917.354251	159736.1991	61.79%	11.96367227	0.075	0	0	
Alameda	2024	LHDT2	Aggregate	Aggregate	Electricity	15.49131497	1090.487211	0.42%	0	0.000	1090.487211	703.0445145	0.645
Alameda	2024	MCY	Aggregate	Aggregate	Gasoline	26267.29331	152639.6215	100.00%	3.683839492	0.024	0	0	
Alameda	2024	MDV	Aggregate	Aggregate	Gasoline	134110.7385	4980332.957	96.64%	246.5360188	0.050	0	0	
Alameda	2024	MDV	Aggregate	Aggregate	Diesel	1883.691486	72884.43028	1.41%	2.941089993	0.040	0	0	
Alameda	2024	MDV	Aggregate	Aggregate	Electricity	1410.450867	50813.79984	0.99%	0	0.000	50813.79984	19618.32063	0.386
Alameda	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	1037.246895	49646.00518	0.96%	0.79329932	0.016	25999.83624	7852.725465	0.302
Alameda	2024	MHDT	Aggregate	Aggregate	Gasoline	1646.77726	85631.5095	12.35%	18.18377586	0.212	0	0	
Alameda	2024	MHDT	Aggregate	Aggregate	Diesel	14077.45799	598407.5165	86.31%	70.87480725	0.118	0	0	
Alameda	2024	MHDT	Aggregate	Aggregate	Electricity	38.51310217	1999.764399	0.29%	0	0.000	1999.764399	2206.758803	1.104
Alameda	2024	MHDT	Aggregate	Aggregate	Natural Gas	147.7046907	7246.418492	1.05%	1.01640003	0.140	0	0	
Alameda	2024	HHDT	Aggregate	Aggregate	Gasoline	6.512104597	898.9199328	0.05%	0.238807262	0.266	0	0	
Alameda	2024	HHDT	Aggregate	Aggregate	Diesel	14019.35976	1801241.053	95.76%	301.5126077	0.167	0	0	
Alameda	2024	HHDT	Aggregate	Aggregate	Electricity	40.82471858	4380.548876	0.23%	0	0.000	4380.548876	8047.392164	1.837
Alameda	2024	HHDT	Aggregate	Aggregate	Natural Gas	1044.383087	74496.19506	3.96%	14.16389432	0.190	0	0	
Alameda	2024	OBUS	Aggregate	Aggregate	Gasoline	610.2133302	30444.73345	52.91%	6.34490564	0.208	0	0	
Alameda	2024	OBUS	Aggregate	Aggregate	Diesel	362.9257155	26876.32823	46.71%	3.791195691	0.141	0	0	
Alameda	2024	OBUS	Aggregate	Aggregate	Electricity	0.918937995	84.1685424	0.15%	0	0.000	84.1685424	93.24586655	1.108
Alameda	2024	OBUS	Aggregate	Aggregate	Natural Gas	2.063348452	133.4816208	0.23%	0.017796965	0.133	0	0	
Alameda	2024	UBUS	Aggregate	Aggregate	Gasoline	255.0030274	20852.16865	19.59%	2.387867428	0.115	0	0	
Alameda	2024	UBUS	Aggregate	Aggregate	Diesel	674.8467919	74225.51	69.74%	9.248685839	0.125	0	0	
Alameda	2024	UBUS	Aggregate	Aggregate	Electricity	14.13091943	1244.382099	1.17%	0	0.000	1244.382099	2169.261776	1.743
Alameda	2024	UBUS	Aggregate	Aggregate	Natural Gas	109.7868836	10105.91285	9.50%	1.451394811	0.144	0	0	
Alameda	2024	SBUS	Aggregate	Aggregate	Gasoline	83.54854543	4472.148206	30.36%	0.440740767	0.099	0	0	
Alameda	2024	SBUS	Aggregate	Aggregate	Diesel	403.785506	9573.360969	65.00%	1.180633639	0.123	0	0	
Alameda	2024	SBUS	Aggregate	Aggregate	Electricity	1.243873534	45.54353936	0.31%	0	0.000	45.54353936	47.97809614	1.053
Alameda	2024	SBUS	Aggregate	Aggregate	Natural Gas	25.33404192	637.2541208	4.33%	0.11582887	0.182	0	0	
Alameda	2024	MH	Aggregate	Aggregate	Gasoline	1850.56126	17316.00577	70.74%	3.920280673	0.226	0	0	
Alameda	2024	MH	Aggregate	Aggregate	Diesel	701.5283416	7161.842144	29.26%	0.763301897	0.107	0	0	

Grey highlighted columns indicated calculations using EMFAC data, not data output from EMFAC.

Land Use Subtype	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.570753	0.056481	0.17922	0.111941	0.020784	0.005211	0.013984	0.013033	0.00079	0.00056	0.024477	0.000343	0.002423

Total Annual VMT: 1,741,842

VMT by Fleet Category	Total	Diesel	Gasoline	Plug-in Hybrid	Electricity	Natural Gas
LDA	994161.55	2678.820465	876026.2659	29370.47796	86085.98272	0
LDT1	98380.98	19.53698989	97877.89373	167.9805779	315.566702	0
LDT2	312172.92	1113.946086	306746.9705	2806.21508	1505.791613	0
MDV	194983.54	2757.499812	188425.2528	1878.300337	1922.482524	0
LHDT1	36202.44	12180.8177	23873.49058	0	148.1358451	0
LHDT2	9076.74	5608.171304	3430.281489	0	38.2858683	0
MHDT	24357.92	21024.48076	3008.581901	0	70.25982625	254.5960436
HHDT	22701.43	21738.63822	10.84879515	0	52.86753099	899.0722425
OBUS	1376.06	642.7552772	728.0947353	0	2.012915393	3.192252135
UBUS	975.43	680.2901492	191.1138761	0	11.40498575	92.62250894
MCY	42635.07	0	42635.06663	0	0	0
SBUS	597.45	388.3421132	181.4120966	0	1.847467611	25.85012857
MH	4220.48	1234.848518	2985.634648	0	0	0

Percent Fuel Type by Fleet Category	Diesel	Gasoline	Plug-in Hybrid	Electricity	Natural Gas
LDA	0.27%	88.12%	2.95%	8.66%	0.00%
LDT1	0.02%	99.49%	0.17%	0.32%	0.00%
LDT2	0.36%	98.26%	0.90%	0.48%	0.00%
MDV	1.41%	96.64%	0.96%	0.99%	0.00%
LHDT1	33.65%	65.94%	0.00%	0.41%	0.00%
LHDT2	61.79%	37.79%	0.00%	0.42%	0.00%
MHDT	86.31%	12.35%	0.00%	0.29%	1.05%
HHDT	95.76%	0.05%	0.00%	0.23%	3.96%
OBUS	46.71%	52.91%	0.00%	0.15%	0.23%
UBUS	69.74%	19.59%	0.00%	1.17%	9.50%
MCY	0.00%	100.00%	0.00%	0.00%	0.00%
SBUS	65.00%	30.36%	0.00%	0.31%	4.33%
MH	29.26%	70.74%	0.00%	0.00%	0.00%

Fuel Consumption (gallons for Diesel/Gas; kWh for Electricity)	Diesel	Gasoline	Plug-in Hybrid	Electricity	Natural Gas
LDA	62.79848615	29146.33827	481.2962927	33236.29439	0
LDT1	0.810517354	3875.118483	2.478577315	121.8347921	0
LDT2	34.267123	12542.74352	43.53814547	581.3598424	0
MDV	111.2728064	9327.410845	30.01358065	742.2369254	0
LHDT1	763.2664505	2470.102143	0	96.97010721	0
LHDT2	420.0320521	400.5691559	0	24.68315945	0
MHDT	2490.119158	638.8697252	0	77.53237838	35.71025143
HHDT	3638.865261	2.882093245	0	97.12156323	170.9397939
OBUS	90.66755759	151.7402805	0	2.230002264	0.425619629
UBUS	84.76586916	21.88523445	0	19.88167434	13.30229449
MCY	0	1028.964437	0	0	0
SBUS	47.89224641	17.87859053	0	1.946225082	4.698582687
MH	131.608907	675.9368163	0	0	0

*Note that natural gas consumption is negligible an not accounted for in summary tab. Plug-in Hybrid is summed with Gasoline in Summary Tab.
Total Annual VMT is based on CalEEMod VMT estimate.

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Appendix E: Final Transportation Impact Study

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Final Transportation Impact Study for the Hexcel Redevelopment Project

Prepared for the City of Dublin

Submitted by
W-Trans

December 12, 2022

TRAFFIC ENGINEERING
TRANSPORTATION PLANNING
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Executive Summary

The Hexcel Redevelopment Project is located at 11711 Dublin Boulevard in the City of Dublin. This project involves replacing the existing 62,715 square-foot research and development building with a new building that will consist of 18,000 square feet of office space, 36,500 square feet of light industrial space, and 70,804 square feet of warehousing space. The project is expected to generate an average net reduction of 201 trips per day and will generate an average increase of 1 a.m. and 2 p.m. peak hour trips. Because the project would effectively result in no change in trips on the network, it would result in no change to traffic operation.

This project is presumed to have a less-than-significant transportation impact on vehicle miles traveled (VMT) since the estimated VMT per employee is below the significance threshold of 12.9 miles per employee.

The Dublin Boulevard/Hansen Drive intersection was evaluated to determine if acceptable operation would also be expected upon converting the Hansen Drive and driveway approaches to protected left-turn phasing. It was determined that the intersection would function acceptably under all volume scenarios evaluated.

Vehicles would access the project site via existing driveways on Dublin Boulevard. Sight distances at each driveway for both entering and exiting drivers is adequate, though landscaping should be kept trimmed to maintain adequate sight lines. Signage should be placed at the easterly driveway warning drivers of trucks not to use that driveway.

Pedestrian, bicycle, and transit facilities within the study area are adequate and would be improved upon completion of facilities identified in the City's draft *Bike and Pedestrian Plan*. Various alternatives were developed to accommodate a Class I bike path, Class IV separated bike trail and/or sidewalk on both sides of Dublin Boulevard.

The proposed on-site circulation and access design are expected to comply with City design standards.

The proposed parking supply of 227 spaces meets the City's parking requirement of 227 spaces and the proposed parking space sizes meet the City's parking size requirements.

Introduction

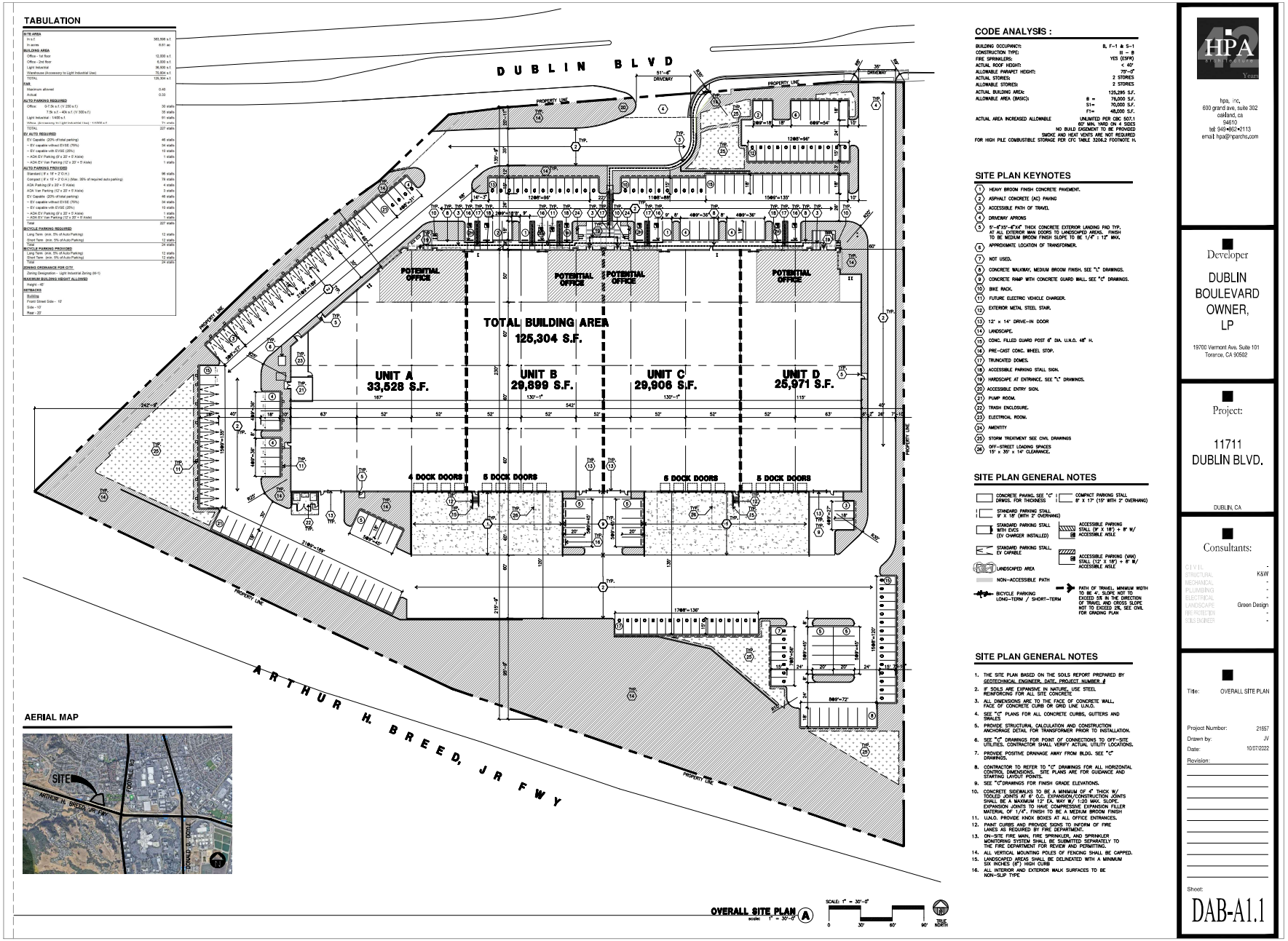
This report presents an analysis of the potential traffic impacts that would be associated with development of a mixed-use office, light industrial, and warehouse building which would replace an existing research and development building located at 11711 Dublin Boulevard in the City of Dublin. The traffic study was completed in accordance with the criteria established by the City of Dublin and is consistent with standard traffic engineering techniques.

Prelude

The purpose of a traffic impact study is to provide City of Dublin staff and policy makers with data that they can use to make an informed decision regarding the potential transportation impacts of a proposed project, and any associated improvements that would be required in order to mitigate these impacts to an acceptable level under CEQA, the City's General Plan, or other policies. Impacts relative to access for pedestrians, bicyclists, and to transit are addressed in the context of the CEQA criteria. Consistent with SB 743, the project's transportation impacts were analyzed using VMT. While no longer a part of the CEQA review process, vehicular traffic service levels at key intersections were evaluated for consistency with General Plan policies by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the study intersections.

Project Profile

The proposed project would replace an existing research and development building with a new building consisting of office, light industrial, and warehouse uses. The proposed project site plan is shown in Figure 1.



CODE ANALYSIS :

BUILDING OCCUPANCY:	B, F-1 & S-1
CONSTRUCTION TYPE:	II – B
FIRE SPRINKLERS:	YES (OSHA)
ACTUAL ROOF HEIGHT:	< 40'
ALLOWABLE PARAPET HEIGHT:	70'-0"
ACTUAL STORIES:	2 STORIES
ALLOWABLE STORIES:	2 STORIES
ACTUAL BUILDING AREA:	125,295 S.F.
ALLOWABLE AREA (BASIC):	B – 76,000 S.F. S1– 70,000 S.F. F1– 48,000 S.F.
ACTUAL AREA INCREASED ALLOWABLE	UNLIMITED PER CBC 507.1 60' MIN. YARD ON 4 SIDES NO BUILD EASEMENT TO BE PROVIDED SMOKE AND HEAT VENTS ARE NOT REQUIRED

FOR HIGH PILE COMBUSTIBLE STORAGE PER CFC TABLE 3206.2 FOOTNOTE H.

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONCRETE PAVEMENT.
2. ASPHALT CONCRETE (AC) PAVING
3. ACCESSIBLE PATH OF TRAVEL
4. DRIVEWAY APRONS
5. 5'-4"x65'-4"x4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH SLOPE TO BE 1/4" : 1'0" MAX.
6. APPROXIMATE LOCATION OF TRANSFORMER.
7. NOT USED.
8. CONCRETE WALKWAY, MEDIUM BROOM FINISH. SEE "L" DRAWINGS.
9. CONCRETE RAMP WITH CONCRETE GUARD WALL. SEE "C" DRAWINGS.
10. BIKE RACK.
11. FUTURE ELECTRIC VEHICLE CHARGER.
12. EXTERIOR METAL STEEL STAIR.
13. 12' x 14' DRIVE-IN DOOR
14. LANDSCAPE.
15. CONC. FILLED GUARD POST 6" DIA. U.N.O. 48" H.
16. PRE-CAST CONC. WHEEL STOP.
17. TRUNCATED DOMES.
18. ACCESSIBLE PARKING STALL SIGN.
19. HARDSCAPE AT ENTRANCE. SEE "L" DRAWINGS.
20. ACCESSIBLE ENTRY SIGN.
21. PUMP ROOM.
22. TRASH ENCLOSURE.
23. ELECTRICAL ROOM.
24. AMENITY
25. STORM TREATMENT SEE CIVIL DRAWINGS
26. OFF-STREET LOADING SPACES 15' x 35' x 14' CLEARANCE.

SITE PLAN GENERAL NOTES

- CONCRETE PAVING, SEE "C" DRWGS. FOR THICKNESS
- COMPACT PARKING STALL 8' X 17' (15' WITH 2' OVERHANG)
- STANDARD PARKING STALL 9' X 18' (WITH 2' OVERHANG)
- ACCESSIBLE PARKING STALL (9' X 18') + 8' W/ ACCESSIBLE AISLE
- STANDARD PARKING STALL WITH EVCS (EV CHARGER INSTALLED)
- STANDARD PARKING STALL, EV CAPABLE
- ACCESSIBLE PARKING (VAN) STALL (12' X 18') + 8' W/ ACCESSIBLE AISLE
- LANDSCAPED AREA
- NON-ACCESSIBLE PATH
- BICYCLE PARKING LONG-TERM / SHORT-TERM
- PATH OF TRAVEL, MINIMUM WIDTH TO BE 4', SLOPE NOT TO EXCEED 5% IN THE DIRECTION OF TRAVEL AND CROSS SLOPE NOT TO EXCEED 2%, SEE CIVIL FOR GRADING PLAN

SITE PLAN GENERAL NOTES

1. THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY GEOTECHNICAL ENGINEER, DATE, PROJECT NUMBER #
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES
5. PROVIDE STRUCTURAL CALCULATION AND CONSTRUCTION ANCHORAGE DETAIL FOR TRASH ENCLOSURE PRIOR TO INSTALLATION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1/2" MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". FINISH TO BE A MEDIUM BROOM FINISH
11. U.N.O. PROVIDE KNOX BOXES AT ALL OFFICE ENTRANCES.
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. ON-SITE FIRE MAIN, FIRE SPRINKLER, AND SPRINKLER MONITORING SYSTEM SHALL BE SUBMITTED SEPARATELY TO THE FIRE DEPARTMENT FOR REVIEW AND PERMITTING.
14. ALL VERTICAL MOUNTING POLES OF FENCING SHALL BE CAPPED.
15. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
16. ALL INTERIOR AND EXTERIOR WALK SURFACES TO BE NON-SLIP TYPE

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MECHANICAL -
PLUMBING -
ELECTRICAL -
LANDSCAPE Green Design
FIRE PROTECTION -
GEO ENGINEER -

Title: OVERALL SITE PLAN
Project Number: 21657
Drawn by: JV
Date: 10/07/2022
Revision:

Sheet: DAB-A1.1

Source: HPA Architecture 9/7

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Transportation Impact Study for the Hexcel Redevelopment Project

Figure 1 – Site Plan

Transportation Setting

Study Area and Periods

The study area of this project varies by topic. For pedestrian trips, it consists of all streets and pedestrian travel routes within a half-mile of the project site. For bicycle trips, it consists of all streets and bicycle travel routes within one mile of the project site. For the traffic operational analysis, it consists of the Dublin Boulevard/Hansen Drive intersection. The driveway connections were evaluated for operational issues such as adequacy of sight distance and need for a left-turn lane. Additionally, the segments of Dublin Boulevard between Silvergate Drive and Donlon Way and between Hansen Drive and Silvergate Drive were assessed to determine the feasibility of installing Class I or IV bike lanes and a sidewalk on the south side of the street.

Operating conditions during the a.m. and p.m. peak periods were evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute.

Study Roadways and Intersection

Dublin Boulevard is a 7.5-mile-long east-west road with two 10-foot-wide lanes in each direction. The posted speed limit is 35 mph.

Dublin Boulevard/Hansen Drive is a four-way signalized intersection with protected left-turn phasing on both the eastbound and westbound approaches along Dublin Boulevard and split phased operation along the Hansen Drive. Marked crosswalks with pedestrian phasing exist along the north and east legs of the intersection. The southern leg is a driveway for the proposed project site. Existing lane configurations and controls of this intersection are shown in Figure 2.

Alternative Modes

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In the vicinity of the project site, sidewalks, crosswalks, pedestrian signals, and curb ramps provide connected access for pedestrians with the exception of a gap in the sidewalk network to the west of the project site.

- **Dublin Boulevard** – Continuous sidewalks are provided on both sides of Dublin Boulevard east of Hansen Drive. To the west, however, sidewalks are not provided on the south side of Dublin Boulevard. There is a network of curb ramps, crosswalks with pedestrian phasing at signalized intersections, as well as overhead lighting. Dublin Boulevard provides access to both commercial and residential areas.

- **Hansen Drive** – Hansen Drive is classified as a local street and it serves a residential neighborhood consisting primarily of single-family homes. Sidewalks are provided on both sides of Hansen Drive. Crosswalks are provided at Silvergate Drive, Amarillo Road, and Dublin Boulevard. Lighting is provided by overhead streetlights.

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Transportation Impact Study for the Hexcel Redevelopment Project

Figure 2 – Study Area and Existing Lane Configurations

W-Trans

Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2017, classifies bikeways into four categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

In the project area, Class II bike lanes exist on Dublin Boulevard for about 0.55 miles west of San Ramon Road, as well as along the entirety of Silvergate Drive. Class III bike routes exist on Dublin Boulevard between San Ramon Road and Clark Avenue. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area.

Table 1 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the draft *Dublin Bicycle and Pedestrian Plan*. This plan has recently been presented to the Dublin City Council but has not yet been approved.

Table 1 – Bicycle Facility Summary

Status Facility	Class	Length (miles)	Begin Point	End Point
Existing				
Dublin Blvd	I	0.3	Inspiration Dr (1000' east)	Silvergate Dr (750' west)
Dublin Blvd	II	0.6	Silvergate Dr (750' west)	San Ramon Rd
Silvergate Dr	II	1.1	Dublin Blvd	San Ramon Rd
San Ramon Rd	II	1.5	Alcosta Blvd	Dublin Blvd
Dublin Blvd	III	0.9	San Ramon Rd	Clark Ave
Planned				
Dublin Blvd	I/IV	4.4	Kelly Canyon Dr	Scarlett Dr
Hansen Dr	III	0.4	Silvergate Dr	Dublin Blvd

Notes: * All or portions of these bikeways are located within the project site
Source: *Dublin Bicycle and Pedestrian Plan (draft)*, 2022

Transit Facilities

The Livermore Amador Valley Transit Authority (LAVTA) Tri-Valley Wheels Bus provides fixed route bus service in Dublin, Pleasanton, and Livermore. The closest stop is located approximately 0.3 miles from the project site at the Silvergate Drive/Betlen Drive intersection. This stop serves Wheels Bus Local Route 503 which primarily serves students at Dublin High School and Wells Middle School with seven stops in West Dublin.

The Wheels Bus Route 30R stop is located approximately 0.7 miles east of the project site and provides daily service to destinations between West Dublin/Pleasanton Bay Area Rapid Transit (BART) and Livermore.

The West Dublin/Pleasanton BART station is located approximately one mile from the project site. The station is along the "blue line" that operates direct train service between the Daly City and Dublin/Pleasanton stations. Connecting service to other BART lines is available via a transfer at the Bay Fair or other stations. Existing transit routes and their operation schedules are summarized in Table 2.

Table 2 – Transit Routes

Transit Agency Route	Distance to Stop (mi)[1]	Service			Connection
		Days of Operation	Time	Frequency	
Livermore Amador Valley Transit Authority Tri-Valley Wheels					
Route #30R	0.7	Mon – Fri Sat Sun	5:52 a.m. – 9:52 p.m. 6:27 a.m. – 9:58 p.m. 6:19 a.m. – 9:50 p.m.	30 minutes 1 hour 1 hour	West Dublin BART to Livermore
Route #503 EB	0.3	Mon, Tues, Thurs, Fri Wed	7:54 a.m. 7:45 a.m. – 8:29 a.m.	44 minutes	Dublin & Brigadoon to Wells Middle School
Route #503 WB	0.3	Mon, Tues, Thurs Wed Fri	3:35 p.m. – 4:21 p.m. 2:32 p.m. – 3:22 p.m. 2:46 p.m. – 3:46 p.m.	46 minutes 50 minutes 1 hour	Wells Middle School/Dublin High School to Dublin & Marshall Canyon
Bay Area Rapid Transit (BART)					
West Dublin/ Pleasanton	1.0	Mon – Fri Sat Sun	5:09 a.m. – 1:32 a.m. 5:47 a.m. – 1:32 a.m. 7:12 a.m. – 1:32 a.m.	15 minutes 30 minutes 30 minutes	Daly City to Dublin/Pleasanton

Note: [1] Defined as the shortest walking distance between the project site and the nearest bus stop
Source: wheelsbus.com; bart.gov

Two bicycles can be carried on all LAVTA Tri-Valley Wheels fixed-route buses. Bike rack space is on a first come, first served basis. On BART trains, bicycles are allowed except in the first car or any crowded car. During commute hours, bikes are not allowed in the first three cars of any train. Cyclists must yield to other passengers and yield priority seating to seniors and people with disabilities.

Paratransit Services

Wheels Dial-A-Ride provides paratransit services to eligible people with disabilities who live in Livermore, Pleasanton, or Dublin. Additionally, BART provides paratransit services through lift vans to people with disabilities who cannot ride BART trains. Paratransit services are provided by both through reservations only.

On-Demand Transportation Services

On-demand private vehicle services, such as Uber and Lyft, are available in the project area 24 hours a day. These private vehicle services can be used for trips both within the local area and to further destinations, including transit stops/stations and local airports.

For a limited amount of time, Tri-Valley Wheels is paying half of Uber and Lyft fares (up to $5) for rideshare trips that either start or end in Dublin, Pleasanton, or Livermore.

Vehicle Miles Traveled (VMT)

Guidance provided by both the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018, and the City of Dublin's *Transportation Impact Analysis Guidelines* (Dated July 15, 2021), was used to evaluate the proposed project's potential vehicle miles traveled (VMT). Guidance provided in these documents recommends the use of screening thresholds to quickly identify when a project would be expected to result in a less-than-significant impact without conducting a detailed study. (See CEQA Guidelines, 15036l(3)(C), 15128, and Appendix G.) The criteria used by the City of Dublin states that projects located in areas where the baseline VMT for employees is 15 or more percent below the existing regional average per employee could be considered to be in a low-VMT area and therefore presumed to have a less-than-significant VMT impact.

According to the Alameda County Travel Demand Model, the existing countywide VMT per employee for the East Planning Area is 15.2 miles. Based on OPR guidance and the City's TIA Guidelines, a project generating a VMT that is 15 percent or more below this value, or 12.9 miles per employee, would have a less-than-significant VMT impact. The City of Dublin *Transportation Impact Analysis Guidelines* publishes a screening map which shows that this project is located inside an area with a projected VMT per employee lower than 12.9 miles. Because this per employee VMT rate is below the significance threshold of 12.9 miles, the project would be considered to have a less-than-significant VMT impact. A copy of the screening map showing VMT estimates in Dublin is provided in Appendix A.

Finding – The proposed project would be expected to have a less-than-significant VMT transportation impact.

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersection was analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 6th edition. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The study intersection is currently controlled by a traffic signal and was evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. For the purposes of this study, delays were calculated using signal timing obtained from the City of Dublin.

The ranges of delay associated with the various levels of service are indicated in Table 3.

Table 3 – Signalized Intersection Level of Service Criteria	
LOS A	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
LOS B	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
LOS C	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
LOS D	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
LOS E	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
LOS F	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Reference: *Highway Capacity Manual*, 6th Edition, Transportation Research Board, 2018

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation of the study intersection based on existing traffic volumes during the a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes. Existing traffic volume data was collected on August 25, 2022, when local schools were in session. Copies of the traffic count data sheets are provided in Appendix B. The study area and the existing lane configurations are shown in Figure 2. The existing traffic volumes are shown in Figure 3.

Upon request from City Staff, the Dublin Boulevard/Hansen Drive intersection was assessed using existing signal phasing as well as an eight-phase operation with protected left turns on all four approaches to provide a comparison of the potential phasing schemes. Copies of the Level of Service calculations are provided in Appendix C.

Under existing conditions, the Dublin Boulevard/Hansen Drive intersection is operating acceptably during both peaks. Using eight-phase signal operation, delay would increase during both peak hours though remain acceptable at LOS B. Under existing volumes there would be nominal changes to the Level of Service and delay

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Transportation Impact Study for the Hexcel Redevelopment Project

Figure 3 – Existing, Existing plus Project, Future, and Future plus Project Traffic Volumes

due to changing from the existing operation to an eight-phase scheme with protected left turns on Hansen Drive and the project driveway. These results are summarized in Table 4.

Table 4 – Existing and Existing with 8-Phase Operation Peak Hour Intersection Levels of Service

Study Intersection	Existing (Current Phasing)				Existing (8-Phase Operation)			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Dublin Blvd/Hansen Dr	12.2	B	12.9	B	13.1	B	13.6	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Future Conditions

Roadway segment volumes for the horizon year of 2040 were obtained from the Alameda County Transportation Commission's travel demand model. The average annual growth rates for the a.m. and p.m. peak hours were obtained by comparing the projected 2020 volumes to the projected 2040 volumes along Dublin Boulevard between Silvergate Drive and San Ramon Road. The a.m. peak hour volumes are projected to grow by approximately 1.21 percent per year while the p.m. peak hour volumes are projected to grow by approximately 1.48 percent per year. Future traffic counts were obtained by multiplying the existing traffic counts by the annual growth rate for 18 years until 2040.

Under the anticipated Future volumes, the Dublin Boulevard/Hansen Drive intersection is expected to operate acceptably at LOS B during both the a.m. and p.m. peak hours under current signal phasing and with eight phases. These results are summarized in Table 5. The future traffic volumes are shown in Figure 3.

Table 5 – Future and Future with 8-Phase Operation Peak Hour Intersection Levels of Service

Study Intersection	Current Phasing				8-Phase Operation			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Dublin Blvd/Hansen Dr	12.5	B	13.7	B	13.3	B	14.6	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Project Description

The proposed project consists of 18,000 square feet of office space, 36,500 square feet of light industrial space, and 70,804 square feet of warehousing space, along with 227 vehicle parking spaces and 12 long-term and short-term bicycle parking spaces.

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 11th Edition, 2021 for "General Office Building" (ITE LU 710), "General Light Industrial" (ITE LU 110), and "Warehousing" (ITE LU 150). Because the site is currently occupied, "Research and Development Center" rates (ITE LU 760) were applied to estimate trips associated with the existing use.

The expected trip generation potential for the proposed project is indicated in Table 6, with deductions taken for trips made to and from the existing research and development building which will cease with the construction of the project. The proposed project is expected to generate an average of 494 trips per day, including 66 trips during the a.m. peak hour and 63 during the p.m. peak hour. After deductions for the existing land use are taken into account, the proposed project would result in a net reduction of 201 trips on a daily basis, with an increase of 1 net new trip during the morning peak hour and 2 net new trips during the evening peak hour; the net trips represent the increase or decrease in traffic associated with the project compared to existing volumes.

Table 6 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
	(ksf)	Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing											
Research & Dev	-62.715	11.08	-695	1.03	-65	-53	-12	0.98	-61	-10	-51
Proposed											
Offices	18.000	10.84	195	1.52	27	24	3	1.44	26	4	22
Light Industrial	36.500	4.87	178	0.74	27	24	3	0.65	24	3	21
Warehousing	70.804	1.71	121	0.17	12	9	3	0.18	13	4	9
Proposed Subtotal			*494*		*66*	*57*	*9*		*63*	*11*	*52*
Total (Proposed less Existing)			**-201**		**1**	**4**	**-3**		**2**	**1**	**1**

Note: ksf = 1,000 square feet

Trip Distribution

The pattern used to allocate new project trips to the street network was based on 2020 projection data for inbound and outbound trips from Dublin Boulevard. This data was obtained from the Alameda County Countywide Travel Demand Model for the a.m. and p.m. peak hours. The applied distribution assumptions and resulting trips are shown in Table 7.

Table 7 – Trip Distribution Assumptions

Route	Percent	Daily	AM Peak	PM Peak
Dublin Boulevard (West)	48%	-96	0	1
Dublin Boulevard (East)	52%	-105	1	1
TOTAL	**100%**	**-201**	**1**	**2**

Intersection Operation

Existing plus Project Conditions

Upon the addition of project-related traffic to the existing volumes, the study intersections would continue to operate acceptably using either the existing or eight-phase configuration. These results are summarized in Table 8. The Existing plus Project traffic volumes are shown in Figure 3.

Table 8 – Existing and Existing plus Project Peak Hour Intersection Levels of Service								
Study Intersection	**Existing Conditions**				**Existing plus Project**			
Phasing	**AM Peak**		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Dublin Blvd/Hansen Dr								
Existing Signal Phasing	12.2	B	12.9	B	12.1	B	13.0	B
Eight-Phase Operation	13.1	B	13.6	B	13.0	B	13.7	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

It is noted that with the addition of project-related traffic volumes, average delay at the intersection of Dublin Boulevard/Hansen Drive slightly decreases during the a.m. peak hour. While this is counter-intuitive, this condition occurs when a project adds trips to movements that are currently underutilized or have delays that are below the intersection average, resulting in a better balance between approaches and lower overall average delay. The conclusion could incorrectly be drawn that the project improves operation based on this data alone; however, it is more appropriate to conclude that the project trips are expected to make use of excess capacity, so drivers will experience little, if any, change in conditions as a result of the project.

Finding – Under both the existing phasing and with eight phase operation, the study intersection is expected to continue operating acceptably at the same Levels of Service upon the addition of project-generated traffic as without it.

Future plus Project Conditions

The study intersection is expected to operate acceptably at LOS B using existing phasing and eight-phase operation with or without the addition of project-generated traffic to the anticipated Future volumes. The Future plus Project operating conditions are summarized in Table 9 and the volumes are shown in Figure 3.

Table 9 – Future and Future plus Project Peak Hour Intersection Levels of Service								
Study Intersection	**Future Conditions**				**Future plus Project**			
Phasing	**AM Peak**		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Dublin Blvd/Hansen Dr								
Existing Signal Phasing	12.5	B	13.7	B	12.4	B	13.8	B
Eight-Phase Operation	13.3	B	14.6	B	13.3	B	14.7	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

It should be noted that with the addition of project-related traffic volumes, average delay at the intersection of Dublin Boulevard/Hansen Drive would decrease during the a.m. peak hour. As noted previously, this condition reflects use of excess capacity and should not be interpreted as meaning that the project improves operation.

Finding – The study intersection would continue operating acceptably and at the same acceptable Levels of Service with the addition of project-generated traffic to future conditions under both existing phasing and eight-phase operation.

Alternative Modes Analysis

Pedestrian Facilities

Given the proximity of nearby shopping centers, schools, residential and other commercial areas to the site, it is reasonable to assume that some project patrons and employees would want to walk, bicycle, and/or use transit to reach the project site. Sidewalks exist along the project frontage, and on both sides of Dublin Boulevard east of the project site. Although sidewalks do not exist on the south side of Dublin Boulevard west of the project site between Hansen Drive and Silvergate Drive, the site is accessible via the sidewalks to the north side of Dublin Boulevard and via the crosswalks at Hansen Drive/Dublin Boulevard.

Finding – Pedestrian facilities serving the project site are adequate since a network of facilities is present nearby and the project site is accessible using existing facilities.

Bicycle Facilities

Existing bicycle facilities, including Class II bike lanes and Class III bike routes on Dublin Boulevard together with shared use of minor streets, provide adequate access for bicyclists. The planned Class III route along Hansen Drive and Class I Multi-Use Path or Class IV Separated Bikeway along Dublin Boulevard would further improve bicycle facilities in the area.

Finding – Bicycle access to the site is adequate since the area is served by a network of bicycle facilities.

Bicycle Storage

The proposed project would provide 24 bicycle parking stalls on-site, with 12 short-term and 12 long-term stalls. The required number of parking stalls is based on the City of Dublin Municipal Code 8.76.070; Development Standards, which states that bicycle parking requirements shall conform to the California Building Standards Code. The California Green Building Standards Code states that the number of short-term and long-term bicycle parking stalls provided must be equal to or greater than five percent of the number of motorized vehicle parking spaces provided. The site plan shows that 227 motorized parking spaces would be provided. Therefore, a minimum of 11 short-term and long-term parking stalls are required.

Finding – The 24 bicycle storage spaces that would be provided are adequate and exceed the City's bicycle parking requirements.

Transit Facilities

Development sites which are located within one-half mile (2,640 feet) of a transit stop are generally considered to be adequately served by transit. Existing transit routes were reviewed and determined to be adequate to accommodate project-generated transit trips. Existing stops are within an acceptable walking distance of the site and would be accessible via the existing sidewalk network in the study area.

If 20 percent of peak hour trips were made by transit, there would be 13 and 12 additional transit riders during the a.m. and p.m. peak hours respectively, spread out over multiple buses and times. As such, the volume of transit riders expected to be generated by the project is not anticipated to exceed the carrying capacity of the existing transit services near the project site.

Finding – The project site is adequately served by transit since existing transit stops are less than one-half mile away.

Dublin Boulevard Alternative Mode Analysis

Sidewalks and Class I or IV bicycle facilities are proposed along Dublin Boulevard in the vicinity of the project site in the *Dublin Bicycle and Pedestrian Master Plan* (Draft 2022). To further support the development of these proposed improvements, a feasibility study exploring options to expand the existing sidewalk network and construct a Class I multi-use path or Class IV separated bikeway along the section of Dublin Boulevard between Silvergate Drive and Donlon Way was initiated.

Sidewalk Feasibility Between Hansen Drive and Silvergate Drive

The feasibility of adding a sidewalk along the south side of Dublin Boulevard between Hansen Drive and Silvergate Drive was assessed. Through the evaluation two options were identified which would provide a sidewalk within this area. Each option as well as the existing condition are described in detail below.

The public right of way along this segment of Dublin Boulevard is approximately 120 feet wide with varying curb-to-curb width throughout the block. Class II bike lanes currently exist on both sides of the street and are separated from automobile travel lanes by 3-foot-wide buffers. A sidewalk also exists along the north side, adjacent to the westbound travel lanes on Dublin Boulevard. The median varies between four feet and 25 feet wide. The existing cross-section of Dublin Boulevard between Hansen Drive and Silvergate Drive is shown in Plate 1.

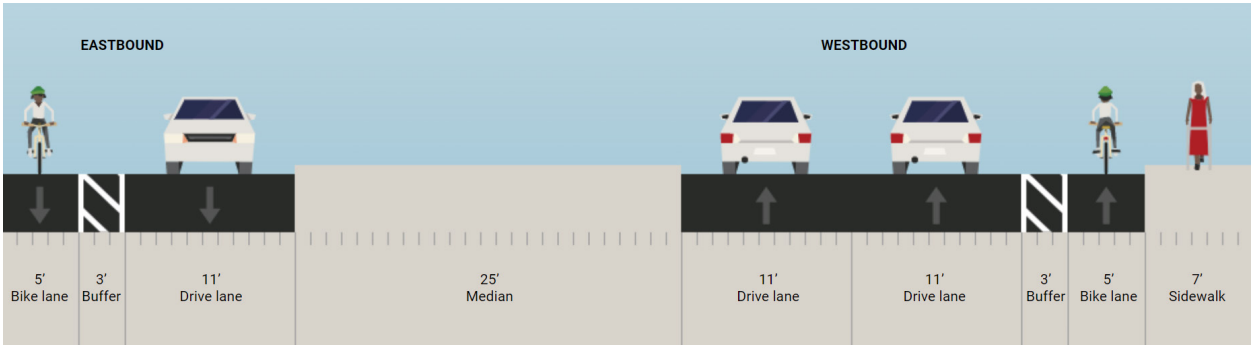

Plate 1 Existing Cross-Section of Dublin Boulevard between Hansen Drive and Silvergate Drive

As illustrated in Option A, shown in Plate 2, Dublin Boulevard could be widened along the eastbound side by approximately seven feet to make way for a new sidewalk. This would, however, require the removal (and reconstruction) of the existing guard rail as well as the construction of a retaining wall within the undeveloped sloped area just south of Dublin Boulevard.

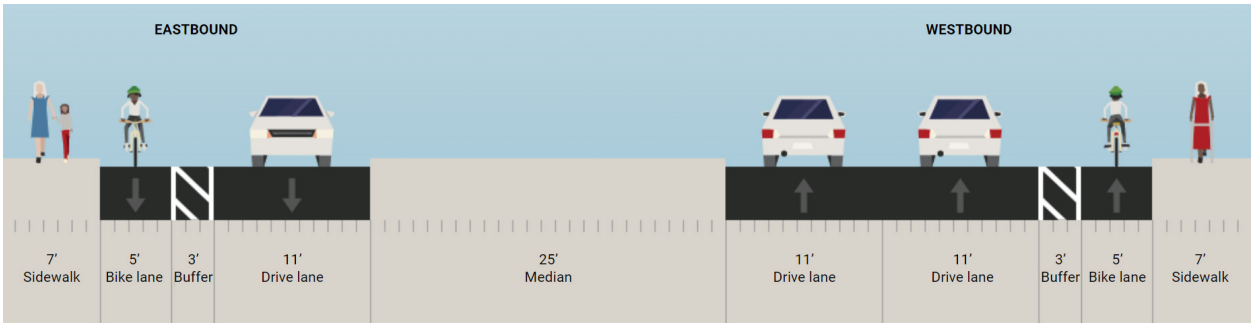

Plate 2 Option A – Widen Dublin Boulevard to the South

The existing median along Dublin Boulevard could be narrowed by approximately seven feet as shown as Option B in Plate 3. The travel lane and bike lane on the south side could be shifted laterally to the north which would

provide space for a new sidewalk along the southern edge of the roadway. The two westbound travel lanes approaching Silvergate Drive would also need to be merged into a single lane to accommodate the new sidewalk.

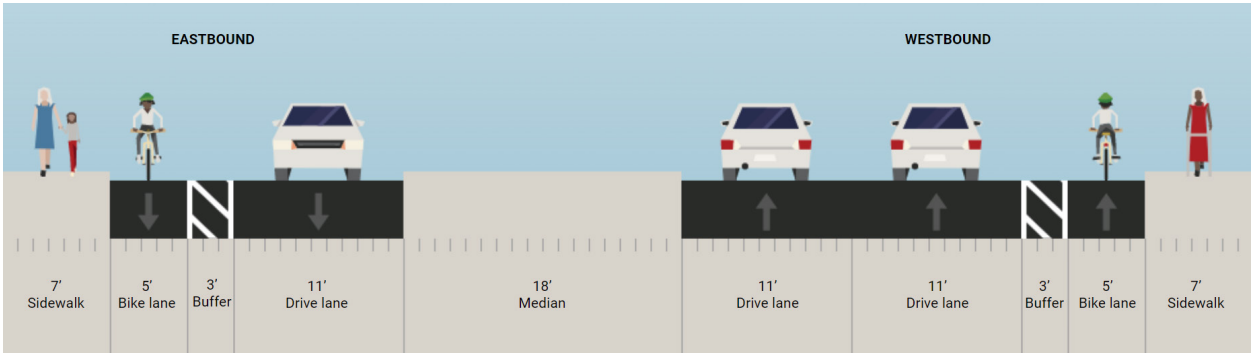

Plate 3 Option B – Narrow the Median

Class I or Class IV Installation Feasibility

The section of Dublin Boulevard between Silvergate Drive and Donlon Way was assessed to explore whether installing a Class I multi-use path or Class IV separated bikeway is feasible. The segments between Donlon Way and Hansen Drive and between Hansen Drive and Silvergate Way were examined separately since the curb-to-curb width and configurations vary between the two segments.

Between Hansen Drive and Silvergate Drive

The existing sidewalk on the north side of Dublin Boulevard could be reconstructed to merge the existing Class II bike lane and sidewalk to form a 12-foot-wide Class I multi-use path. The center median would be narrowed by two feet and the westbound travel lanes would be shifted to the south by two feet. The eastbound Class II bike lane would be maintained. This option, which is preferred by City Staff, is titled as Option C and is illustrated in Plate 4.

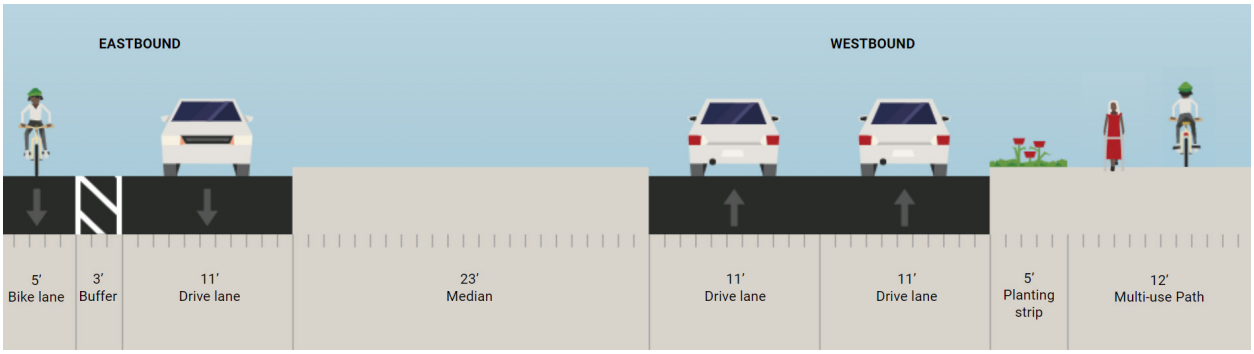

Plate 4 Option C – Westbound Only Class I Multi-Use Path

As was suggested for Option C above, the sidewalk along the north side of Dublin Boulevard could be merged with the Class II bike lane to create a 12-foot-wide Class I multi-use path. The eastbound side could be widened by five feet into the undeveloped sloped area to create space for a 12-foot-wide multi-use path. This option requires the construction of retaining walls to support the widening of Dublin Boulevard. The center median would be narrowed by four feet to allow for 12-foot-wide multi-use paths and five-foot-wide landscaped areas serving as buffer space between the pathway and vehicle traveled way. The westbound travel lanes would be shifted southward by two feet and the eastbound travel lane would be shifted northward by four feet. This option is titled Option D and is illustrated in Plate 5.

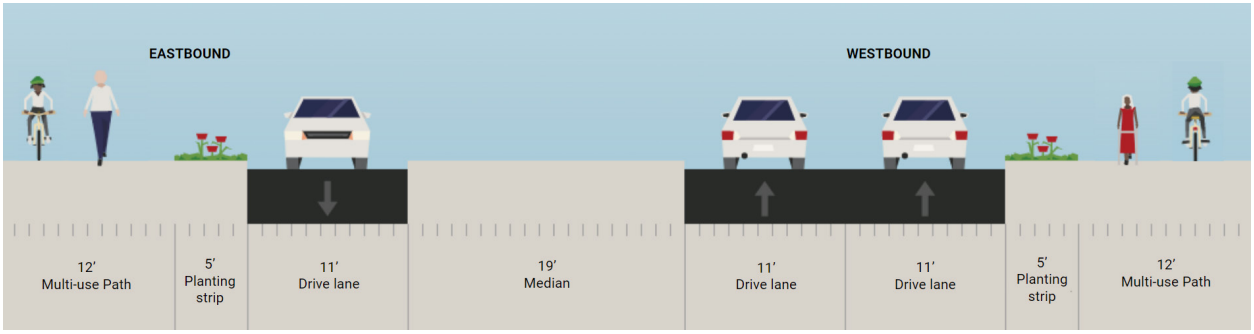

Plate 5 Option D – Westbound and Eastbound Class I Multi-Use Paths with Widened Eastbound Side

As illustrated in Plate 6, Option E includes narrowing of the existing median along Dublin Boulevard by eleven feet and shifting the travel lane on the eastbound side north toward the center of the roadway. Combined with the removal of the Class II bike lake, this would provide room for a 12-foot-wide Class I multi-use path and a five-foot-wide buffer/landscaped area. On the westbound side, the bike lane and sidewalk would be reconstructed and combined to create a 12-foot-wide Class I multi-use path and a five-foot-wide buffer/landscaped area. To the east of the intersection with Silvergate Drive, the existing four-foot-wide median and left-turn lane would be realigned to the north and one of the westbound travel lanes eliminated. To the west of the intersection with Hansen Drive, the second eastbound travel lane would also be eliminated.

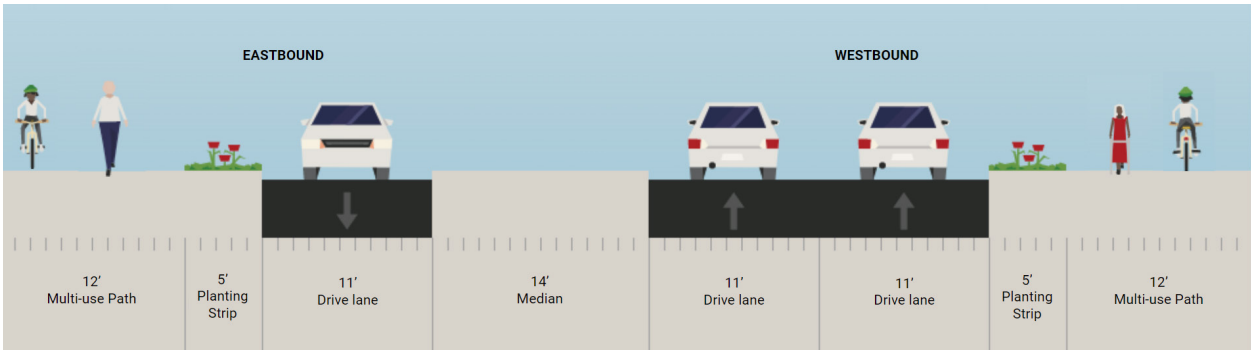

Plate 6 Option E – Westbound and Eastbound Class I Multi-Use Path with Narrowed Median

As shown in Option F, the existing cross-section between Hansen Drive and Silvergate Drive would remain without reconstruction of its existing lanes. However, a raised element (such as bollards) would be added within the existing buffer spaces between the bike lanes and travel lanes on both directions. This option is illustrated in Plate 7.

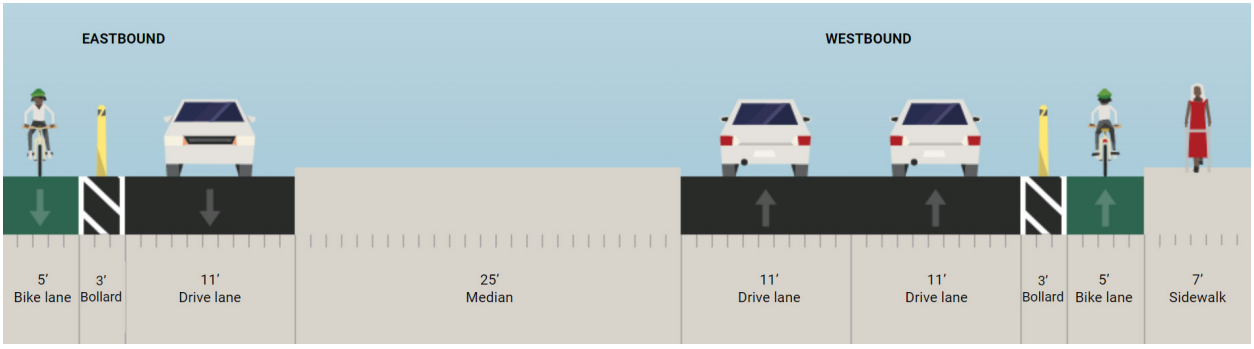

Plate 7 Option F – Class IV Separated Bikeway Option

Between Donlon Way and Hansen Drive

The public right of way on Dublin Boulevard between Donlon Way and Hansen Drive is approximately 97 feet wide with a curb-to-curb width of around 78 feet. Class II bike lanes exist on both sides of the road with on-street parking permitted along the westbound side only and not allowed near Hansen Drive where a right turn lane is provided instead of parking. Along the eastbound side of the road is the Dublin Heritage Park, which includes a 5-foot-wide landscaped section which serves as a buffer between the curb and the sidewalk. The existing cross-section of Dublin Boulevard is shown in Plate 8.

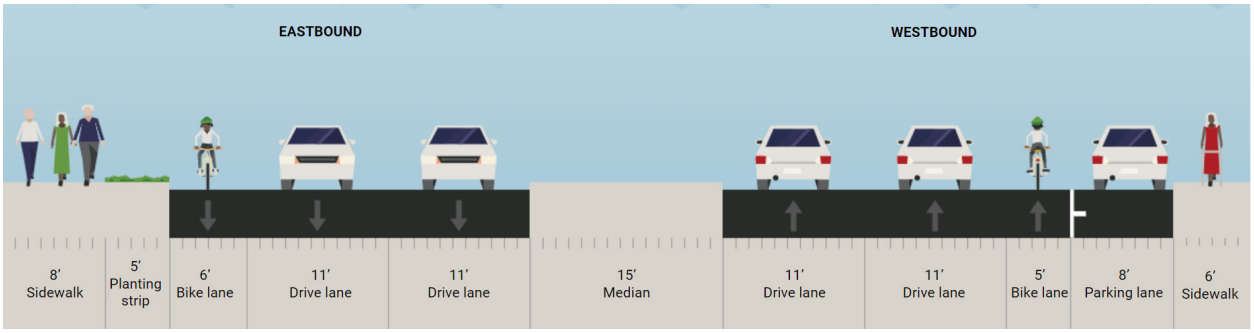

Plate 8 Existing Cross-Section of Dublin Boulevard between Donlon Way and Hansen Drive

As shown in Option G, the existing sidewalk along the north side could be reconstructed and merged with the bike lane to create a 12-foot-wide Class I multi-use path, though this would require eliminating the Class II bike lane. The five-foot planting strip on the south side would be removed and relocated to the north side and the sidewalk on the south side would be shortened by one foot. The center median and all lanes would be shifted six feet to the south. The potential layout for Dublin Boulevard under this option is shown in Plate 9.

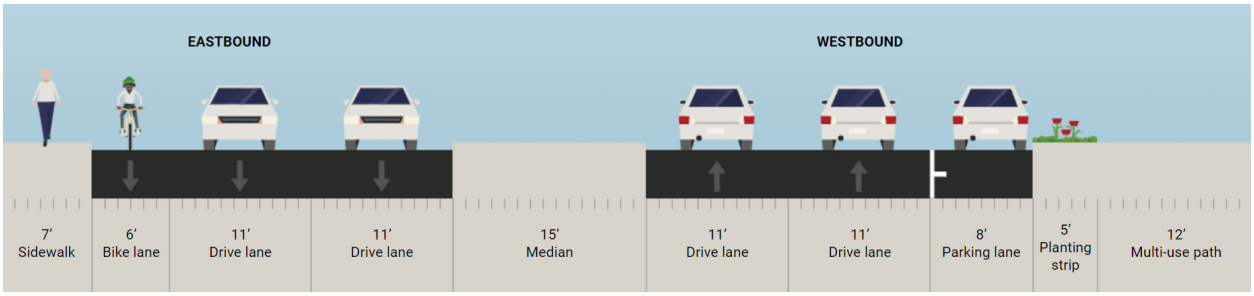

Plate 9 Option G – Westbound Only Class I Multi-Use Path

Option H includes the reconstruction of the existing sidewalks on both sides of Dublin Boulevard to create a 12-foot-wide Class I multi-use path in each direction in addition to five-foot-wide buffer/landscaped area on both sides as shown in Plate 10. Under this option, the existing Class II bike lanes would be eliminated in both directions and the center median would be narrowed by four feet. The westbound parking lane and travel lanes would be shifted to the south by two feet while the eastbound travel lanes would be shifted north by two feet.

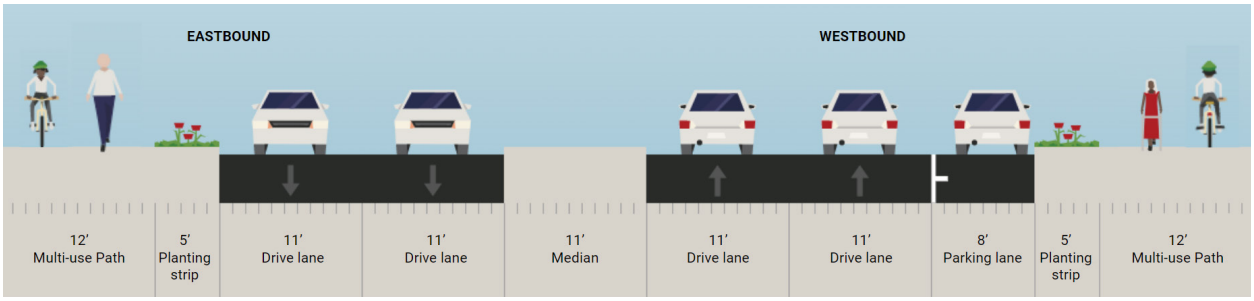

Plate 10 Option H – Class I Multi-Use Path

Option I would be comprised of removing the on-street parking along the westbound side of Dublin Boulevard, as well as the right-turn lane at the intersection with Hansen Drive to make way for 3.5-foot-wide buffers with a raised element between the existing bike lanes and drive lanes on both sides. The travel lanes and median would also be shifted to the north by 3.5 feet, while the westbound bike lane would be shifted to the north by 7 feet. The potential layout for Dublin Boulevard under this option is shown in Plate 11.

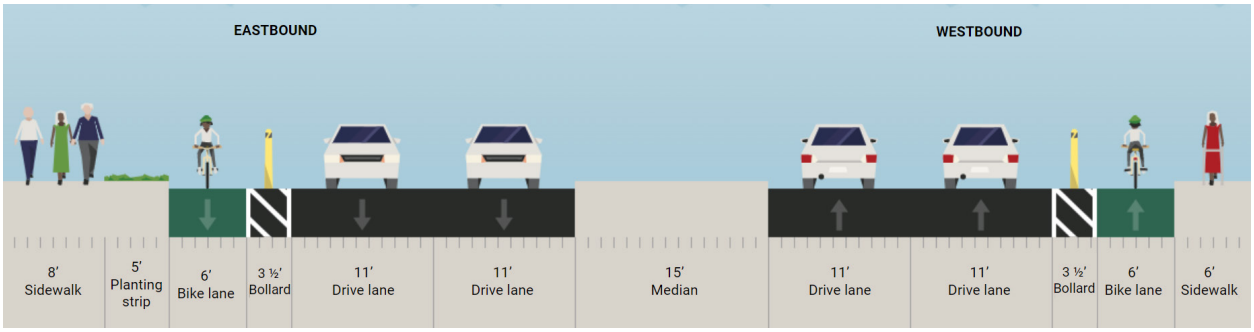

Plate 11 Option I – Class IV

Finding – Several options for the reconstruction of Dublin Boulevard have been identified which would provide either new Class I multi-use pathways or Class IV separated bikeways in the vicinity of the project site.

Access and Circulation

Site Access

The site is currently accessible via two driveways along Dublin Boulevard. The western driveway is also the southern leg of the Dublin Boulevard/Hansen Drive intersection. The eastern driveway is located approximately 180 feet east of the Dublin Boulevard/Hansen Drive intersection. The raised median along Dublin Boulevard prohibits left-turn egress from this driveway, though there is a left-turn pocket that accommodates left turns into the site. The primary driveway across from Hansen Drive also provides access to the adjacent land use to the west. The project's driveways and internal roadway network would be designed to meet current City standards and so can be expected to accommodate the access requirements for both emergency and passenger vehicles.

Sight Distance

At driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting to enter the street and the driver of an approaching vehicle. The sight distances along Dublin Boulevard at the project driveways were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distances for driveway approaches are based on stopping sight distance and use the approach travel speed as the basis for determining the recommended sight distance. Based on the posted speed limit of 35 mph, the minimum stopping sight distance required is 250 feet; a review in the field shows that sight distances at the proposed project driveways on Dublin Boulevard each exceed 250 feet to the west and so are adequate. To maintain this sight distance, it is noted that any vegetation near the project's driveways should be trimmed to an appropriate height of less than three feet and trees trimmed so that nothing hangs below a height of seven feet from the surface of the roadway.

For a motorist traveling westbound on Dublin Boulevard intending to turn left into either project driveway, the stopping sight distance looking west along Dublin Boulevard is also greater than 250 feet, providing adequate visibility to allow a following driver to observe and react to a vehicle that may slow before moving into the left-turn pocket before entering the driveway.

Finding – Adequate sight distance is available at the proposed project driveway locations to accommodate all turns entering and exiting the site.

Recommendations – To achieve a minimum sight distance of 250 feet at each driveway access point, it is recommended that vegetation along the project frontage be trimmed and maintained.

Oversized Vehicle Circulation

Large wheelbase vehicles would be able to access the site via the western driveway as illustrated in the vehicle turning template analysis provided in Appendix D. The design vehicle used for the turn analysis is based on the *Review of Truck Characteristics as Factors in Roadway Design*, Transportation Research Board, 2004, with the Surface Transportation Assistance Act (STAA) Interstate Semi-Trailer (WB-62) vehicle. The WB-62 vehicle has a minimum turning radius of 45 feet, a centerline turning radius of 41 feet, and a minimum inside radius of 7.9 feet. It is noted that the evaluation was limited to only movements between the project site and the east of the site since this represents the most likely direction of travel based on the City of Dublin Truck Route Map (January 2014). As demonstrated by the analysis, the western driveway can accommodate the WB-62 truck for all movements to and from the east. However, the analysis also shows that the WB-62 vehicle is unable to access the eastern driveway without striking fixed objects (such as utility poles and a fire hydrant) adjacent to the driveway.

Finding – Trucks can feasibly access the site via the western driveway. The eastern driveway is not suitable for access by trucks.

Recommendation – Signage should be installed instructing drivers that trucks and other large vehicles are prohibited from accessing the eastern driveway.

Parking

The project was analyzed to determine whether the proposed parking supply would be sufficient to accommodate the anticipated parking demand. The project site as proposed would provide a total of 227 standard parking spaces, shared by various proposed land uses.

The parking supply requirements are based on the City of Dublin Municipal Code, Section 8.76.080; Parking Requirements by Use Type. According to Section 8.76.040 G, if a project contains more than one use type, "the amount of parking to be provided shall be the total of that required by Section 8.76.080." Based on application of the parking requirements for the various uses, the project would be required to provide 227 parking spaces.

Parking demand was estimated using standard rates published by ITE in *Parking Generation*, 5th Edition, 2019. The parking demand for the proposed project was estimated using the published standard rates for "General Office Building" (ITE LU 710), "General Light Industrial" (ITE LU 110), and "Warehousing" (ITE LU 150). According to the ITE estimates 95 parking spaces would be required to accommodate the expected peak demand.

The proposed parking supply of 227 spaces is anticipated to adequately accommodate the estimated peak parking demand of 95 spaces and meets the City Code requirement of 227 spaces. The expected demand and City code requirements are summarized in Table 10.

Table 10 – Parking Analysis Summary

Land Use	Units (ksf)	Supply (spaces)	City Requirements		ITE Parking Generation	
			Rate	Spaces Required	Rate (Per ksf[1])	Est. Parking Demand
Offices	12.000 6.000	227	1 per 0.25 ksf 1 per 0.3 ksf	30 35	2.39	43
Light Industrial	36.500		1 per 0.4 ksf	91	0.65	24
Warehousing	70.804		1 per 1 ksf	71	0.39	28
Total		**227**		**227**		**95**

[1] ksf = 1,000 square feet

City parking space sizes are based on the Dublin Municipal Code, Section 8.76.080; Development Standards. The City requires that full-size spaces must be at least 9 feet by 20 feet and compact spaces must be 8 feet by 17 feet. The length may be reduced by 2 feet if the vehicles parked in them will overhang landscaping or a sidewalk. A review of the site plan confirms that each of the off-street parking spaces on site would be compliant with these requirements.

The Uniform Building Code and the Federal Accessibility Guidelines requires that enough parking spaces for the disabled be provided. The site plan shows that out of 227 spaces available at the proposed project, there are nine stalls designated for disabled persons' use. Based on requirements stipulated by the Federal Accessibility Guidelines, seven accessible stalls are required. Thus, the project complies with the Federal Accessibility Guidelines.

Finding – The proposed parking supply would satisfy the City of Dublin's parking requirements and accommodate the anticipated parking demand. The nine accessible stalls proposed for the project is greater than the seven stalls required.

Conclusions and Recommendations

Conclusions

- The proposed project would be expected to generate 201 fewer trips per day, with one additional trip during the a.m. peak hour and two additional trips in p.m. peak hour.
- The existing pedestrian facilities serving the project site are adequate but would be improved upon installation of a sidewalk along the south side of Dublin Boulevard per the City's Bike and Pedestrian Plan.
- Existing bicycle facilities near the project site are adequate but would be improved upon completion of planned facilities.
- Transit facilities serving the project site are adequate.
- The proposed project would be expected to have a less-than-significant impact on VMT.
- The study intersection at Dublin Boulevard/Hansen Drive currently operates acceptably and is expected to continue doing so under Future volumes and upon the addition of project-generated traffic. Further, acceptable operation is projected for all volume scenarios with the addition of protected left turns on the northbound and southbound approaches.
- Adequate sight distance is available at each of the project driveways.
- Large trucks (WB-62) can access the project site at the western driveway but not at the eastern driveway.
- Constructing a sidewalk along the south side of Dublin Boulevard between Hansen Drive and Silvergate Drive is feasible by either widening Dublin Boulevard to the south or by narrowing the existing median.
- Installing a Class I Multi-Use path or Class IV Separated Bikeway along Dublin Boulevard between Donlon Way and Silvergate Drive is feasible. The option preferred by City staff would provide a Class I Multi-Use path on the north side of Dublin Boulevard.
- The proposed parking supply meets City requirements and the estimated parking demand.
- The nine accessible stalls provided by the project would be more than the required minimum of seven stalls.

Recommendations

- Signage stating that trucks are prohibited from accessing the eastern driveway should be installed.

Study Participants and References

Study Participants

Principal in Charge	Mark E. Spencer, PE
Senior Traffic Engineer	Kenny Jeong, PE
Assistant Engineer	Valerie Haines, EIT
Graphics	Cameron Wong
Editing/Formatting	Hannah Yung-Boxdell
Quality Control	Dalene J. Whitlock, PE, PTOE

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DUB900-2

Appendix A

Vehicle Miles Traveled Screening Map

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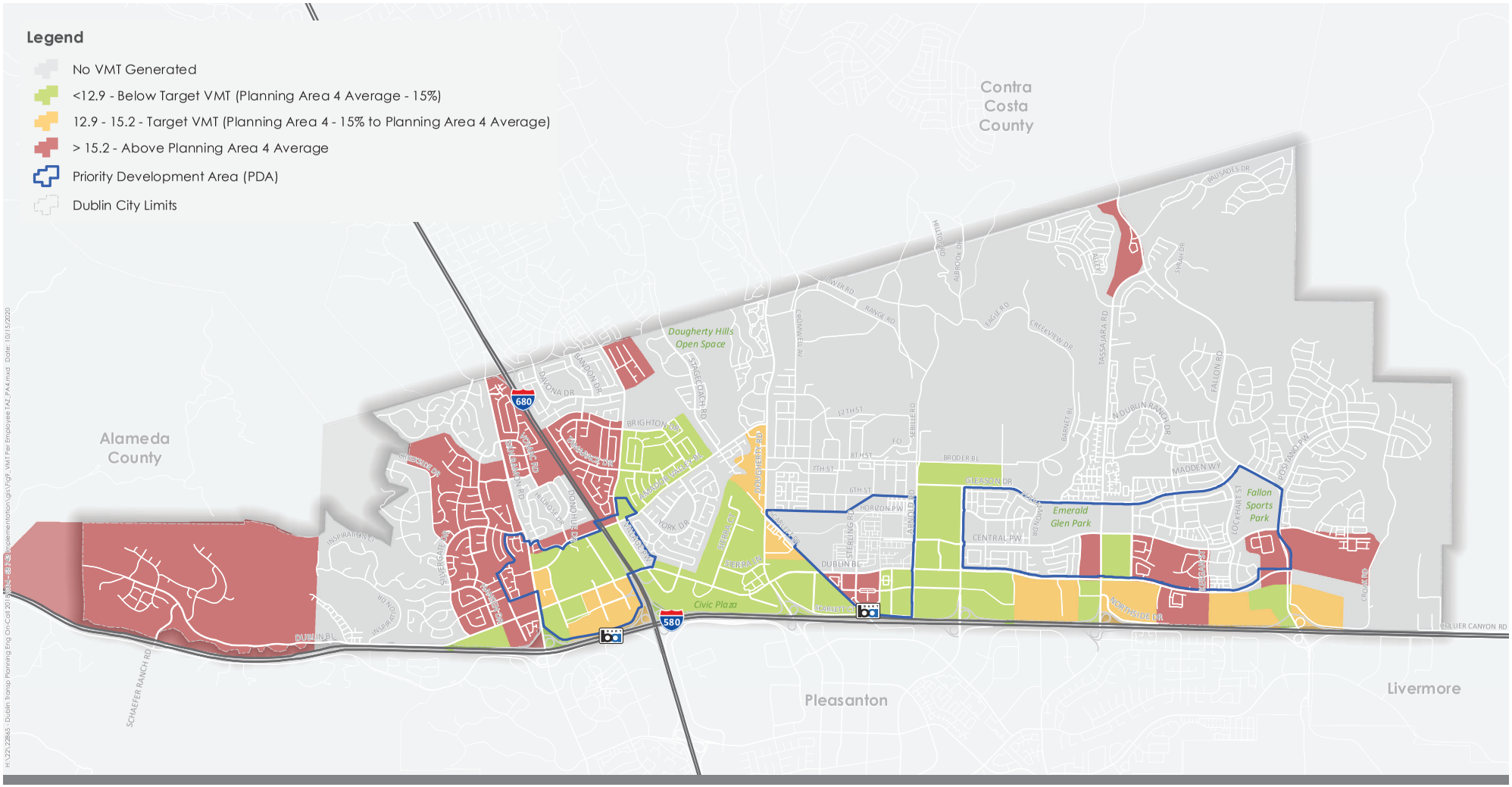

DUBLIN
CALIFORNIA

KITTELSON & ASSOCIATES

Employment VMT (VMT per Employee)
Dublin, California

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Appendix B

Dublin Boulevard/Hansen Drive Peak Hour Volumes

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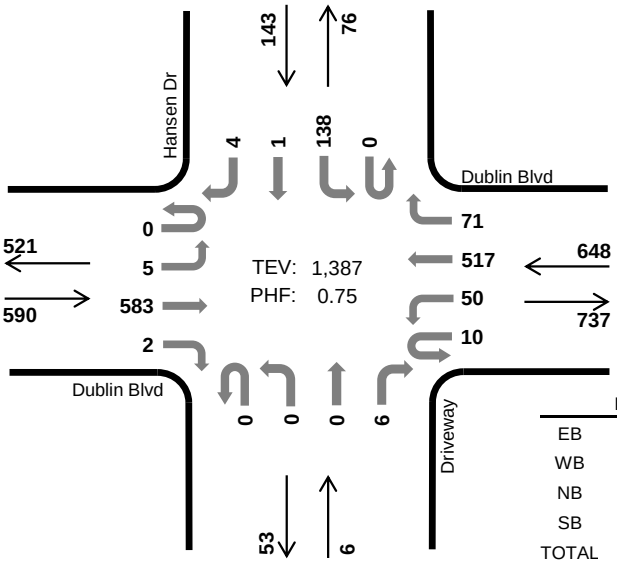
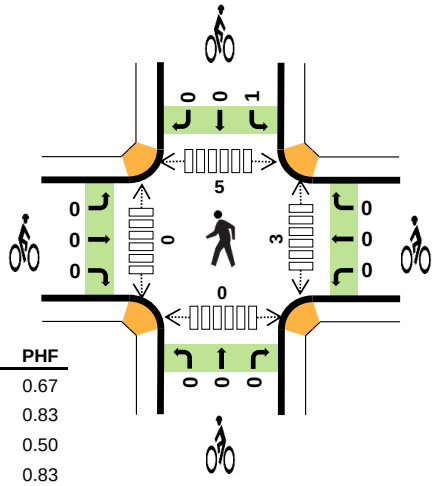
Hansen Dr
Dublin Blvd

Date: 08/25/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	0.5%	0.67
WB	0.6%	0.83
NB	0.0%	0.50
SB	0.7%	0.83
TOTAL	0.6%	0.75

Two-Hour Count Summaries

Interval Start	Dublin Blvd Eastbound				Dublin Blvd Westbound				Driveway Northbound				Hansen Dr Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	39	0	0	7	20	6	0	0	0	2	0	25	1	0	100	0
7:15 AM	0	1	47	0	2	9	31	5	0	0	0	0	0	27	0	0	122	0
7:30 AM	0	0	75	0	0	11	76	11	0	0	0	1	0	38	0	0	212	0
7:45 AM	**0**	**1**	**164**	**1**	**1**	**30**	**116**	**5**	**0**	**0**	**0**	**3**	**0**	**37**	**0**	**0**	**358**	792
8:00 AM	**0**	**1**	**220**	**0**	**5**	**11**	**163**	**16**	**0**	**0**	**0**	**2**	**0**	**39**	**0**	**4**	**461**	1,153
8:15 AM	**0**	**1**	**113**	**1**	**0**	**5**	**140**	**22**	**0**	**0**	**0**	**1**	**0**	**35**	**0**	**0**	**318**	1,349
8:30 AM	**0**	**2**	**86**	**0**	**4**	**4**	**98**	**28**	**0**	**0**	**0**	**0**	**0**	**27**	**1**	**0**	**250**	**1,387**
8:45 AM	0	4	82	0	1	3	64	27	0	0	0	1	0	23	0	0	205	1,234
Count Total	0	10	826	2	13	80	708	120	0	0	0	10	0	251	2	4	2,026	0
Peak Hour All	**0**	**5**	**583**	**2**	**10**	**50**	**517**	**71**	**0**	**0**	**0**	**6**	**0**	**138**	**1**	**4**	**1,387**	**0**
Peak Hour HV	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**8**	**0**
Peak Hour HV%	**-**	**0%**	**1%**	**0%**	**0%**	**0%**	**1%**	**1%**	**-**	**-**	**-**	**0%**	**-**	**1%**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	1	0	*1*
7:15 AM	1	1	0	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	3	0	0	*3*	0	0	0	0	*0*	1	0	4	0	*5*
7:45 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**2**	**2**	**0**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**4**	**0**	*4*
8:15 AM	**1**	**1**	**0**	**0**	***2***	**0**	**0**	**0**	**1**	***1***	**1**	**0**	**0**	**0**	*1*
8:30 AM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**0**	***3***
8:45 AM	0	1	0	0	*1*	0	0	0	0	*0*	1	0	3	0	*4*
Count Total	5	9	0	2	*16*	0	0	0	1	*1*	5	0	13	0	*18*
Peak Hour	**3**	**4**	**0**	**1**	***8***	**0**	**0**	**0**	**1**	***1***	**3**	**0**	**5**	**0**	***8***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Dublin Blvd				Dublin Blvd				Driveway				Hansen Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	3	0
7:30 AM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	7
8:00 AM	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	11
8:15 AM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	10
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	9
Count Total	0	0	5	0	0	1	5	3	0	0	0	0	0	2	0	0	16	0
Peak Hour	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**8**	**0**

Two-Hour Count Summaries - Bikes

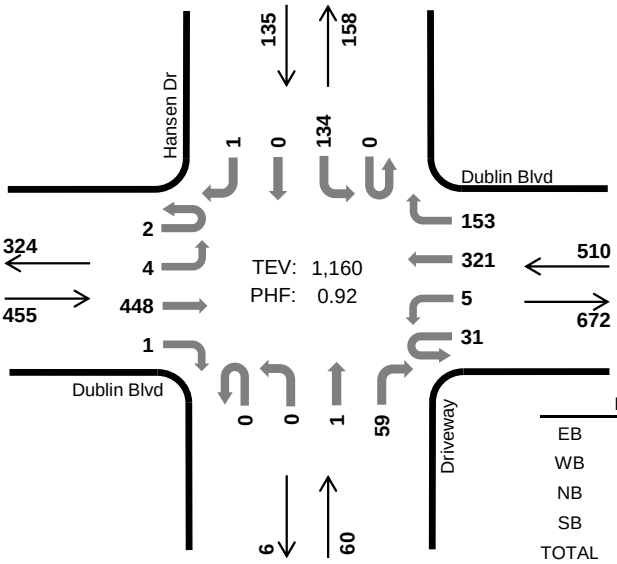
Interval Start	Dublin Blvd			Dublin Blvd			Driveway			Hansen Dr			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	1
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**

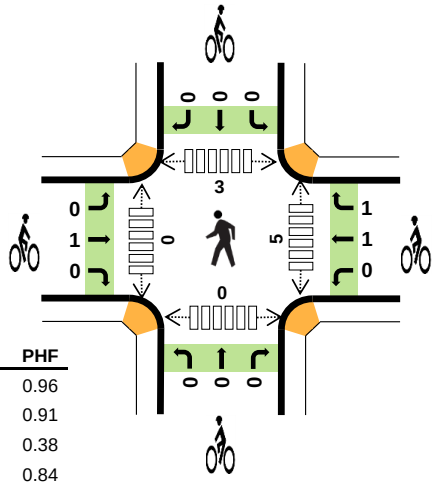
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Hansen Dr
Dublin Blvd

Date: 08/25/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.4%	0.96
WB	0.2%	0.91
NB	0.0%	0.38
SB	1.5%	0.84
TOTAL	0.4%	0.92

Two-Hour Count Summaries

Interval Start	Dublin Blvd Eastbound				Dublin Blvd Westbound				Driveway Northbound				Hansen Dr Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	1	2	125	0	5	1	80	31	0	0	0	6	0	14	0	2	267	0
4:15 PM	0	4	115	1	3	2	70	34	0	0	0	6	0	32	0	2	269	0
4:30 PM	0	2	112	0	1	2	86	42	0	0	0	13	0	22	0	1	281	0
4:45 PM	0	1	118	0	6	0	67	42	0	1	0	13	0	34	0	1	283	1,100
5:00 PM	**0**	**2**	**116**	**0**	**8**	**2**	**76**	**40**	**0**	**0**	**0**	**40**	**0**	**31**	**0**	**0**	**315**	1,148
5:15 PM	**0**	**1**	**112**	**1**	**7**	**1**	**66**	**40**	**0**	**0**	**1**	**9**	**0**	**32**	**0**	**1**	**271**	1,150
5:30 PM	**2**	**0**	**113**	**0**	**10**	**1**	**80**	**39**	**0**	**0**	**0**	**5**	**0**	**40**	**0**	**0**	**290**	1,159
5:45 PM	**0**	**1**	**107**	**0**	**6**	**1**	**99**	**34**	**0**	**0**	**0**	**5**	**0**	**31**	**0**	**0**	**284**	**1,160**
Count Total	3	13	918	2	46	10	624	302	0	1	1	97	0	236	0	7	2,260	0
Peak Hour All	**2**	**4**	**448**	**1**	**31**	**5**	**321**	**153**	**0**	**0**	**1**	**59**	**0**	**134**	**0**	**1**	**1,160**	**0**
Peak Hour HV	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**5**	**0**
Peak Hour HV%	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**1%**	**-**	**-**	**0%**	**0%**	**-**	**1%**	**-**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	1	0	0	*1*	0	0	0	0	*0*
4:15 PM	3	0	1	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	1	0	0	*1*	1	0	0	0	*1*	0	0	1	0	*1*
4:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	1	0	*1*
5:00 PM	**1**	**0**	**0**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**2**	**0**	*2*
5:30 PM	**0**	**1**	**0**	**1**	***2***	**0**	**1**	**0**	**0**	***1***	**5**	**0**	**0**	**0**	*5*
5:45 PM	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**1**	**0**	***1***
Count Total	5	2	1	2	*10*	2	3	0	0	*5*	5	0	5	0	*10*
Peak Hour	**2**	**1**	**0**	**2**	***5***	**1**	**2**	**0**	**0**	***3***	**5**	**0**	**3**	**0**	***8***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Dublin Blvd				Dublin Blvd				Driveway				Hansen Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	2	1	0	0	0	0	0	0	0	1	0	0	0	0	4	0
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	7
5:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	5
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
Count Total	0	0	4	1	0	0	1	1	0	0	0	1	0	2	0	0	10	0
Peak Hour	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**5**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Dublin Blvd			Dublin Blvd			Driveway			Hansen Dr			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:30 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
Count Total	0	2	0	0	2	1	0	0	0	0	0	0	5	0
Peak Hour	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix C

Intersection Level of Service Calculations

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HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

Existing Phasing
12/12/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	583	2	60	517	71	0	0	6	138	1	4
Future Volume (veh/h)	5	583	2	60	517	71	0	0	6	138	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	6	686	2	71	608	84	0	0	7	162	1	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	12	1275	4	97	1416	628	0	0	35	226	1	7
Arrive On Green	0.01	0.35	0.35	0.05	0.40	0.40	0.00	0.00	0.02	0.13	0.13	0.13
Sat Flow, veh/h	1810	3663	11	1810	3582	1588	0	0	1659	1738	11	54
Grp Volume(v), veh/h	6	335	353	71	608	84	0	0	7	168	0	0
Grp Sat Flow(s),veh/h/ln	1810	1791	1883	1810	1791	1588	0	0	1659	1802	0	0
Q Serve(g_s), s	0.1	6.3	6.3	1.6	5.2	1.4	0.0	0.0	0.2	3.7	0.0	0.0
Cycle Q Clear(g_c), s	0.1	6.3	6.3	1.6	5.2	1.4	0.0	0.0	0.2	3.7	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		0.03
Lane Grp Cap(c), veh/h	12	623	656	97	1416	628	0	0	35	234	0	0
V/C Ratio(X)	0.51	0.54	0.54	0.73	0.43	0.13	0.00	0.00	0.20	0.72	0.00	0.00
Avail Cap(c_a), veh/h	671	1500	1577	671	2999	1329	0	0	1270	1095	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.7	10.9	10.9	19.5	9.2	8.1	0.0	0.0	20.1	17.4	0.0	0.0
Incr Delay (d2), s/veh	12.4	1.0	1.0	3.9	0.3	0.1	0.0	0.0	1.1	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.0	2.1	0.7	1.5	0.4	0.0	0.0	0.1	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	12.0	11.9	23.4	9.5	8.2	0.0	0.0	21.2	19.0	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	A	A	C	B	A	A
Approach Vol, veh/h		694			763			7			168	
Approach Delay, s/veh		12.1			10.6			21.2			19.0	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	21.5		10.0	6.7	19.6		5.5				
Change Period (Y+Rc), s	4.5	5.0		4.6	4.5	5.0		4.6				
Max Green Setting (Gmax), s	15.5	35.0		25.4	15.5	35.0		32.0				
Max Q Clear Time (g_c+I1), s	2.1	7.2		5.7	3.6	8.3		2.2				
Green Ext Time (p_c), s	0.0	6.6		0.6	0.0	6.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

Existing Phasing
12/12/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	448	1	36	321	153	0	1	59	134	0	1
Future Volume (veh/h)	6	448	1	36	321	153	0	1	59	134	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	7	487	1	39	349	166	0	1	64	146	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	0	0	1	0	0
Cap, veh/h	14	1026	2	64	1103	486	0	2	117	223	0	2
Arrive On Green	0.01	0.28	0.28	0.04	0.31	0.31	0.00	0.07	0.07	0.12	0.00	0.12
Sat Flow, veh/h	1810	3696	8	1810	3610	1590	0	25	1629	1795	0	12
Grp Volume(v), veh/h	7	238	250	39	349	166	0	0	65	147	0	0
Grp Sat Flow(s),veh/h/ln	1810	1805	1898	1810	1805	1590	0	0	1655	1808	0	0
Q Serve(g_s), s	0.1	4.2	4.2	0.8	2.8	3.1	0.0	0.0	1.4	3.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.2	4.2	0.8	2.8	3.1	0.0	0.0	1.4	3.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.98	0.99		0.01
Lane Grp Cap(c), veh/h	14	501	527	64	1103	486	0	0	119	225	0	0
V/C Ratio(X)	0.52	0.47	0.47	0.61	0.32	0.34	0.00	0.00	0.55	0.65	0.00	0.00
Avail Cap(c_a), veh/h	950	1895	1993	950	3790	1669	0	0	1303	949	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.8	11.4	11.5	18.1	10.2	10.3	0.0	0.0	17.1	15.9	0.0	0.0
Incr Delay (d2), s/veh	10.8	1.0	0.9	3.4	0.2	0.6	0.0	0.0	1.5	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.4	0.3	0.9	0.9	0.0	0.0	0.5	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	12.4	12.4	21.5	10.4	10.8	0.0	0.0	18.5	17.1	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	A	A	B	B	A	A
Approach Vol, veh/h		495			554			65			147	
Approach Delay, s/veh		12.7			11.3			18.5			17.1	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	16.6		9.3	5.9	15.6		7.3				
Change Period (Y+Rc), s	4.5	5.0		4.6	4.5	5.0		4.6				
Max Green Setting (Gmax), s	20.0	40.0		20.0	20.0	40.0		30.0				
Max Q Clear Time (g_c+I1), s	2.1	5.1		5.0	2.8	6.2		3.4				
Green Ext Time (p_c), s	0.0	4.4		0.4	0.0	4.4		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

Existing Phasing
12/12/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	583	3	61	517	71	0	0	3	138	1	4
Future Volume (veh/h)	5	583	3	61	517	71	0	0	3	138	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	6	686	4	72	608	84	0	0	4	162	1	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	12	1276	7	98	1423	631	0	0	29	226	1	7
Arrive On Green	0.01	0.35	0.35	0.05	0.40	0.40	0.00	0.00	0.02	0.13	0.13	0.13
Sat Flow, veh/h	1810	3651	21	1810	3582	1588	0	0	1659	1738	11	54
Grp Volume(v), veh/h	6	336	354	72	608	84	0	0	4	168	0	0
Grp Sat Flow(s),veh/h/ln	1810	1791	1881	1810	1791	1588	0	0	1659	1802	0	0
Q Serve(g_s), s	0.1	6.3	6.3	1.6	5.1	1.4	0.0	0.0	0.1	3.7	0.0	0.0
Cycle Q Clear(g_c), s	0.1	6.3	6.3	1.6	5.1	1.4	0.0	0.0	0.1	3.7	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		0.03
Lane Grp Cap(c), veh/h	12	626	658	98	1423	631	0	0	29	234	0	0
V/C Ratio(X)	0.51	0.54	0.54	0.73	0.43	0.13	0.00	0.00	0.14	0.72	0.00	0.00
Avail Cap(c_a), veh/h	673	1503	1579	673	3007	1333	0	0	1273	1098	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.6	10.9	10.9	19.4	9.1	8.0	0.0	0.0	20.2	17.4	0.0	0.0
Incr Delay (d2), s/veh	12.4	1.0	1.0	3.9	0.3	0.1	0.0	0.0	0.8	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.0	2.1	0.7	1.5	0.4	0.0	0.0	0.0	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	11.9	11.8	23.3	9.4	8.1	0.0	0.0	20.9	18.9	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	A	A	C	B	A	A
Approach Vol, veh/h		696			764			4			168	
Approach Delay, s/veh		12.0			10.6			20.9			18.9	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	21.6		10.0	6.8	19.6		5.3				
Change Period (Y+Rc), s	4.5	5.0		4.6	4.5	5.0		4.6				
Max Green Setting (Gmax), s	15.5	35.0		25.4	15.5	35.0		32.0				
Max Q Clear Time (g_c+I1), s	2.1	7.1		5.7	3.6	8.3		2.1				
Green Ext Time (p_c), s	0.0	6.6		0.6	0.0	6.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

Existing Phasing
12/12/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	448	2	37	321	153	1	1	60	134	0	1
Future Volume (veh/h)	6	448	2	37	321	153	1	1	60	134	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	7	487	2	40	349	166	1	1	65	146	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	14	1008	4	66	1090	473	2	2	119	223	0	2
Arrive On Green	0.01	0.28	0.28	0.04	0.30	0.30	0.07	0.07	0.07	0.12	0.00	0.12
Sat Flow, veh/h	1810	3658	15	1810	3582	1554	25	25	1608	1796	0	12
Grp Volume(v), veh/h	7	238	251	40	349	166	67	0	0	147	0	0
Grp Sat Flow(s),veh/h/ln	1810	1791	1882	1810	1791	1554	1658	0	0	1808	0	0
Q Serve(g_s), s	0.1	4.2	4.2	0.8	2.9	3.2	1.5	0.0	0.0	3.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.2	4.2	0.8	2.9	3.2	1.5	0.0	0.0	3.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.01		0.97	0.99		0.01
Lane Grp Cap(c), veh/h	14	493	518	66	1090	473	123	0	0	224	0	0
V/C Ratio(X)	0.52	0.48	0.48	0.61	0.32	0.35	0.54	0.00	0.00	0.66	0.00	0.00
Avail Cap(c_a), veh/h	735	1642	1726	735	3285	1425	1390	0	0	1203	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.9	11.6	11.6	18.1	10.2	10.3	17.0	0.0	0.0	15.9	0.0	0.0
Incr Delay (d2), s/veh	10.8	1.0	1.0	3.4	0.2	0.6	1.4	0.0	0.0	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.5	0.4	0.9	0.9	0.5	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	12.6	12.6	21.5	10.5	11.0	18.4	0.0	0.0	17.1	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B	A	A	B	A	A
Approach Vol, veh/h		496			555			67			147	
Approach Delay, s/veh		12.8			11.4			18.4			17.1	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	16.6		9.3	5.9	15.5		7.4				
Change Period (Y+Rc), s	4.5	5.0		4.6	4.5	5.0		4.6				
Max Green Setting (Gmax), s	15.5	35.0		25.4	15.5	35.0		32.0				
Max Q Clear Time (g_c+I1), s	2.1	5.2		5.0	2.8	6.2		3.5				
Green Ext Time (p_c), s	0.0	4.3		0.5	0.0	4.3		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

Existing Phasing
12/12/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	710	3	74	630	87	0	0	8	169	2	5
Future Volume (veh/h)	7	710	3	74	630	87	0	0	8	169	2	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	7	710	3	74	630	87	0	0	8	169	2	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	14	1293	5	99	1435	636	0	0	36	235	3	7
Arrive On Green	0.01	0.35	0.35	0.05	0.40	0.40	0.00	0.00	0.02	0.14	0.14	0.14
Sat Flow, veh/h	1810	3658	15	1810	3582	1588	0	0	1658	1731	20	51
Grp Volume(v), veh/h	7	348	365	74	630	87	0	0	8	176	0	0
Grp Sat Flow(s),veh/h/ln	1810	1791	1882	1810	1791	1588	0	0	1658	1803	0	0
Q Serve(g_s), s	0.2	6.7	6.7	1.7	5.5	1.5	0.0	0.0	0.2	4.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.7	6.7	1.7	5.5	1.5	0.0	0.0	0.2	4.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		0.03
Lane Grp Cap(c), veh/h	14	633	666	99	1435	636	0	0	36	245	0	0
V/C Ratio(X)	0.52	0.55	0.55	0.75	0.44	0.14	0.00	0.00	0.22	0.72	0.00	0.00
Avail Cap(c_a), veh/h	652	1456	1531	652	2912	1291	0	0	1233	1064	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.3	11.2	11.2	20.1	9.4	8.2	0.0	0.0	20.7	17.8	0.0	0.0
Incr Delay (d2), s/veh	11.0	1.1	1.0	4.2	0.3	0.1	0.0	0.0	1.1	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.2	2.3	0.7	1.6	0.4	0.0	0.0	0.1	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	12.2	12.2	24.3	9.7	8.3	0.0	0.0	21.8	19.3	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	A	A	C	B	A	A
Approach Vol, veh/h		720			791			8			176	
Approach Delay, s/veh		12.4			10.9			21.8			19.3	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	22.2		10.4	6.8	20.2		5.5				
Change Period (Y+Rc), s	4.5	5.0		4.6	4.5	5.0		4.6				
Max Green Setting (Gmax), s	15.5	35.0		25.4	15.5	35.0		32.0				
Max Q Clear Time (g_c+I1), s	2.2	7.5		6.0	3.7	8.7		2.2				
Green Ext Time (p_c), s	0.0	6.8		0.6	0.1	6.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			12.5									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

Existing Phasing
12/12/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	568	2	46	407	194	0	2	75	170	0	2
Future Volume (veh/h)	8	568	2	46	407	194	0	2	75	170	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	8	568	2	46	407	194	0	2	75	170	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	1	0	0	0	1	0	0
Cap, veh/h	15	1098	4	72	1187	511	0	3	128	237	0	3
Arrive On Green	0.01	0.30	0.30	0.04	0.33	0.33	0.00	0.08	0.08	0.13	0.00	0.13
Sat Flow, veh/h	1810	3689	13	1810	3610	1555	0	43	1613	1786	0	21
Grp Volume(v), veh/h	8	278	292	46	407	194	0	0	77	172	0	0
Grp Sat Flow(s),veh/h/ln	1810	1805	1897	1810	1805	1555	0	0	1656	1807	0	0
Q Serve(g_s), s	0.2	5.3	5.3	1.0	3.5	4.0	0.0	0.0	1.9	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.2	5.3	5.3	1.0	3.5	4.0	0.0	0.0	1.9	3.8	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.00		0.97	0.99		0.01
Lane Grp Cap(c), veh/h	15	537	565	72	1187	511	0	0	132	240	0	0
V/C Ratio(X)	0.52	0.52	0.52	0.64	0.34	0.38	0.00	0.00	0.58	0.72	0.00	0.00
Avail Cap(c_a), veh/h	675	1521	1599	675	3043	1311	0	0	1276	1105	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	12.1	12.1	19.6	10.5	10.7	0.0	0.0	18.5	17.3	0.0	0.0
Incr Delay (d2), s/veh	9.8	1.1	1.0	3.5	0.2	0.7	0.0	0.0	1.5	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.8	1.9	0.4	1.1	1.1	0.0	0.0	0.7	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	13.2	13.2	23.2	10.8	11.3	0.0	0.0	20.0	18.8	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	A	A	B	B	A	A
Approach Vol, veh/h		578			647			77			172	
Approach Delay, s/veh		13.4			11.8			20.0			18.8	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	18.7		10.1	6.1	17.4		7.9				
Change Period (Y+Rc), s	4.5	5.0		4.6	4.5	5.0		4.6				
Max Green Setting (Gmax), s	15.5	35.0		25.4	15.5	35.0		32.0				
Max Q Clear Time (g_c+I1), s	2.2	6.0		5.8	3.0	7.3		3.9				
Green Ext Time (p_c), s	0.0	5.1		0.6	0.0	5.1		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

Existing Phasing
12/12/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	710	4	75	630	87	0	0	5	169	2	5
Future Volume (veh/h)	7	710	4	75	630	87	0	0	5	169	2	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	7	710	4	75	630	87	0	0	5	169	2	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	14	1295	7	100	1441	639	0	0	31	235	3	7
Arrive On Green	0.01	0.35	0.35	0.06	0.40	0.40	0.00	0.00	0.02	0.14	0.14	0.14
Sat Flow, veh/h	1810	3652	21	1810	3582	1588	0	0	1658	1731	20	51
Grp Volume(v), veh/h	7	348	366	75	630	87	0	0	5	176	0	0
Grp Sat Flow(s),veh/h/ln	1810	1791	1881	1810	1791	1588	0	0	1658	1803	0	0
Q Serve(g_s), s	0.2	6.7	6.7	1.8	5.5	1.5	0.0	0.0	0.1	4.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.7	6.7	1.8	5.5	1.5	0.0	0.0	0.1	4.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		0.03
Lane Grp Cap(c), veh/h	14	635	667	100	1441	639	0	0	31	245	0	0
V/C Ratio(X)	0.52	0.55	0.55	0.75	0.44	0.14	0.00	0.00	0.16	0.72	0.00	0.00
Avail Cap(c_a), veh/h	654	1461	1535	654	2922	1295	0	0	1237	1067	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.2	11.1	11.1	20.0	9.3	8.1	0.0	0.0	20.7	17.8	0.0	0.0
Incr Delay (d2), s/veh	11.0	1.1	1.0	4.2	0.3	0.1	0.0	0.0	0.9	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.2	2.3	0.8	1.6	0.4	0.0	0.0	0.1	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	12.1	12.1	24.2	9.6	8.2	0.0	0.0	21.6	19.3	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	A	A	C	B	A	A
Approach Vol, veh/h		721			792			5			176	
Approach Delay, s/veh		12.3			10.8			21.6			19.3	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	22.3		10.4	6.9	20.2		5.4				
Change Period (Y+Rc), s	4.5	5.0		4.6	4.5	5.0		4.6				
Max Green Setting (Gmax), s	15.5	35.0		25.4	15.5	35.0		32.0				
Max Q Clear Time (g_c+I1), s	2.2	7.5		6.0	3.8	8.7		2.1				
Green Ext Time (p_c), s	0.0	6.8		0.6	0.1	6.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

Existing Phasing
12/12/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	568	3	47	407	194	1	2	76	170	0	2
Future Volume (veh/h)	8	568	3	47	407	194	1	2	76	170	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	8	568	3	47	407	194	1	2	76	170	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	1	0	0	0	1	0	0
Cap, veh/h	15	1095	6	73	1189	512	2	3	129	237	0	3
Arrive On Green	0.01	0.30	0.30	0.04	0.33	0.33	0.08	0.08	0.08	0.13	0.00	0.13
Sat Flow, veh/h	1810	3682	19	1810	3610	1555	21	42	1595	1786	0	21
Grp Volume(v), veh/h	8	278	293	47	407	194	79	0	0	172	0	0
Grp Sat Flow(s),veh/h/ln	1810	1805	1896	1810	1805	1555	1658	0	0	1807	0	0
Q Serve(g_s), s	0.2	5.3	5.3	1.1	3.6	4.0	1.9	0.0	0.0	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.2	5.3	5.3	1.1	3.6	4.0	1.9	0.0	0.0	3.8	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.01		0.96	0.99		0.01
Lane Grp Cap(c), veh/h	15	537	564	73	1189	512	135	0	0	240	0	0
V/C Ratio(X)	0.52	0.52	0.52	0.65	0.34	0.38	0.59	0.00	0.00	0.72	0.00	0.00
Avail Cap(c_a), veh/h	672	1514	1591	672	3029	1305	1272	0	0	1100	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.6	12.2	12.2	19.7	10.6	10.7	18.5	0.0	0.0	17.3	0.0	0.0
Incr Delay (d2), s/veh	9.8	1.1	1.1	3.5	0.2	0.7	1.5	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.8	1.9	0.5	1.1	1.1	0.7	0.0	0.0	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	13.3	13.2	23.2	10.8	11.4	20.0	0.0	0.0	18.8	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	A	A	B	A	A
Approach Vol, veh/h		579			648			79			172	
Approach Delay, s/veh		13.5			11.9			20.0			18.8	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	18.7		10.1	6.2	17.4		8.0				
Change Period (Y+Rc), s	4.5	5.0		4.6	4.5	5.0		4.6				
Max Green Setting (Gmax), s	15.5	35.0		25.4	15.5	35.0		32.0				
Max Q Clear Time (g_c+I1), s	2.2	6.0		5.8	3.1	7.3		3.9				
Green Ext Time (p_c), s	0.0	5.1		0.6	0.0	5.1		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			13.8									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

8-Phase Operation
12/02/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	583	2	60	517	71	0	0	6	138	1	4
Future Volume (veh/h)	5	583	2	60	517	71	0	0	6	138	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	6	686	2	71	608	84	0	0	7	162	1	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	12	1120	3	100	1270	562	5	0	66	212	74	372
Arrive On Green	0.01	0.31	0.31	0.06	0.35	0.35	0.00	0.00	0.04	0.12	0.27	0.27
Sat Flow, veh/h	1810	3663	11	1810	3582	1586	1882	0	1660	1795	272	1358
Grp Volume(v), veh/h	6	335	353	71	608	84	0	0	7	162	0	6
Grp Sat Flow(s),veh/h/ln	1810	1791	1883	1810	1791	1586	1882	0	1660	1795	0	1629
Q Serve(g_s), s	0.1	6.2	6.2	1.5	5.1	1.4	0.0	0.0	0.2	3.4	0.0	0.1
Cycle Q Clear(g_c), s	0.1	6.2	6.2	1.5	5.1	1.4	0.0	0.0	0.2	3.4	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	12	548	576	100	1270	562	5	0	66	212	0	447
V/C Ratio(X)	0.51	0.61	0.61	0.71	0.48	0.15	0.00	0.00	0.11	0.76	0.00	0.01
Avail Cap(c_a), veh/h	187	806	848	258	2688	1190	243	0	1374	441	0	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	11.5	11.5	18.0	9.7	8.5	0.0	0.0	17.9	16.5	0.0	10.2
Incr Delay (d2), s/veh	12.4	1.6	1.5	3.5	0.4	0.2	0.0	0.0	0.3	5.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.0	2.1	0.6	1.5	0.4	0.0	0.0	0.1	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	13.0	13.0	21.4	10.1	8.7	0.0	0.0	18.2	22.2	0.0	10.2
LnGrp LOS	C	B	B	C	B	A	A	A	B	C	A	B
Approach Vol, veh/h		694			763			7			168	
Approach Delay, s/veh		13.2			11.0			18.2			21.8	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	18.7	0.0	15.2	6.6	16.8	9.1	6.1
Change Period (Y+Rc), s	4.5	5.0	4.5	4.6	4.5	5.0	4.5	4.6
Max Green Setting (Gmax), s	4.0	29.0	5.0	8.5	5.5	17.4	9.5	32.0
Max Q Clear Time (g_c+I1), s	2.1	7.1	0.0	2.1	3.5	8.2	5.4	2.2
Green Ext Time (p_c), s	0.0	6.0	0.0	0.0	0.0	3.6	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

8-Phase Operation
12/02/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	448	1	36	321	153	0	1	59	134	0	1
Future Volume (veh/h)	6	448	1	36	321	153	0	1	59	134	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	7	487	1	39	349	166	0	1	64	146	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	0	0	1	0	0
Cap, veh/h	14	987	2	64	1066	459	5	2	154	190	0	514
Arrive On Green	0.01	0.27	0.27	0.04	0.30	0.30	0.00	0.09	0.09	0.11	0.00	0.32
Sat Flow, veh/h	1810	3696	8	1810	3610	1554	1882	25	1630	1795	0	1603
Grp Volume(v), veh/h	7	238	250	39	349	166	0	0	65	146	0	1
Grp Sat Flow(s),veh/h/ln	1810	1805	1898	1810	1805	1554	1882	0	1655	1795	0	1603
Q Serve(g_s), s	0.1	4.2	4.2	0.8	2.8	3.2	0.0	0.0	1.4	3.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.2	4.2	0.8	2.8	3.2	0.0	0.0	1.4	3.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	14	482	507	64	1066	459	5	0	156	190	0	514
V/C Ratio(X)	0.52	0.49	0.49	0.61	0.33	0.36	0.00	0.00	0.42	0.77	0.00	0.00
Avail Cap(c_a), veh/h	193	675	710	218	2797	1204	251	0	1415	408	0	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.5	11.6	11.6	17.8	10.3	10.4	0.0	0.0	16.0	16.3	0.0	8.6
Incr Delay (d2), s/veh	10.8	1.1	1.1	3.4	0.3	0.7	0.0	0.0	0.7	6.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.4	0.3	0.9	1.0	0.0	0.0	0.5	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	12.7	12.6	21.2	10.5	11.1	0.0	0.0	16.6	22.7	0.0	8.6
LnGrp LOS	C	B	B	C	B	B	A	A	B	C	A	A
Approach Vol, veh/h		495			554			65			147	
Approach Delay, s/veh		12.9			11.5			16.6			22.6	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	16.1	0.0	16.6	5.8	15.0	8.5	8.1
Change Period (Y+Rc), s	4.5	5.0	4.5	4.6	4.5	5.0	4.5	4.6
Max Green Setting (Gmax), s	4.0	29.0	5.0	7.9	4.5	14.0	8.5	32.0
Max Q Clear Time (g_c+I1), s	2.1	5.2	0.0	2.0	2.8	6.2	5.0	3.4
Green Ext Time (p_c), s	0.0	4.0	0.0	0.0	0.0	2.2	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

8-Phase Operation
12/02/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	583	3	61	517	71	0	0	3	138	1	4
Future Volume (veh/h)	5	583	3	61	517	71	0	0	3	138	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	6	686	4	72	608	84	0	0	4	162	1	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	12	1120	7	101	1276	565	5	0	61	212	74	369
Arrive On Green	0.01	0.31	0.31	0.06	0.36	0.36	0.00	0.00	0.04	0.12	0.27	0.27
Sat Flow, veh/h	1810	3651	21	1810	3582	1586	1882	0	1660	1795	272	1358
Grp Volume(v), veh/h	6	336	354	72	608	84	0	0	4	162	0	6
Grp Sat Flow(s),veh/h/ln	1810	1791	1881	1810	1791	1586	1882	0	1660	1795	0	1629
Q Serve(g_s), s	0.1	6.2	6.2	1.5	5.1	1.4	0.0	0.0	0.1	3.4	0.0	0.1
Cycle Q Clear(g_c), s	0.1	6.2	6.2	1.5	5.1	1.4	0.0	0.0	0.1	3.4	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	12	549	577	101	1276	565	5	0	61	212	0	443
V/C Ratio(X)	0.51	0.61	0.61	0.71	0.48	0.15	0.00	0.00	0.07	0.76	0.00	0.01
Avail Cap(c_a), veh/h	188	808	849	258	2694	1193	244	0	1378	442	0	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	11.4	11.4	17.9	9.6	8.4	0.0	0.0	17.9	16.5	0.0	10.3
Incr Delay (d2), s/veh	12.4	1.6	1.5	3.5	0.4	0.2	0.0	0.0	0.2	5.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.0	2.1	0.6	1.5	0.4	0.0	0.0	0.0	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	13.0	12.9	21.4	10.0	8.6	0.0	0.0	18.1	22.1	0.0	10.3
LnGrp LOS	C	B	B	C	B	A	A	A	B	C	A	B
Approach Vol, veh/h		696			764			4			168	
Approach Delay, s/veh		13.1			10.9			18.1			21.7	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	18.7	0.0	15.1	6.6	16.8	9.1	6.0				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.6	4.5	5.0	4.5	4.6				
Max Green Setting (Gmax), s	4.0	29.0	5.0	8.5	5.5	17.4	9.5	32.0				
Max Q Clear Time (g_c+I1), s	2.1	7.1	0.0	2.1	3.5	8.2	5.4	2.1				
Green Ext Time (p_c), s	0.0	6.0	0.0	0.0	0.0	3.6	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

8-Phase Operation
12/02/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	448	2	37	321	153	1	1	60	134	0	1
Future Volume (veh/h)	6	448	2	37	321	153	1	1	60	134	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	7	487	2	40	349	166	1	1	65	146	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	0	0	1	0	0
Cap, veh/h	14	983	4	66	1066	459	5	2	156	190	0	320
Arrive On Green	0.01	0.27	0.27	0.04	0.30	0.30	0.00	0.10	0.10	0.11	0.00	0.20
Sat Flow, veh/h	1810	3687	15	1810	3610	1554	1882	25	1630	1795	0	1598
Grp Volume(v), veh/h	7	238	251	40	349	166	1	0	66	146	0	1
Grp Sat Flow(s),veh/h/ln	1810	1805	1897	1810	1805	1554	1882	0	1655	1795	0	1598
Q Serve(g_s), s	0.1	4.2	4.2	0.8	2.8	3.2	0.0	0.0	1.4	3.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.2	4.2	0.8	2.8	3.2	0.0	0.0	1.4	3.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	14	481	506	66	1066	459	5	0	158	190	0	320
V/C Ratio(X)	0.52	0.50	0.50	0.61	0.33	0.36	0.20	0.00	0.42	0.77	0.00	0.00
Avail Cap(c_a), veh/h	193	674	708	217	2790	1201	251	0	1412	407	0	336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	11.6	11.6	17.8	10.3	10.4	18.7	0.0	16.0	16.3	0.0	12.0
Incr Delay (d2), s/veh	10.8	1.1	1.1	3.3	0.3	0.7	18.4	0.0	0.7	6.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.5	0.3	0.9	1.0	0.0	0.0	0.5	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	12.8	12.7	21.2	10.6	11.1	37.1	0.0	16.6	22.7	0.0	12.0
LnGrp LOS	C	B	B	C	B	B	D	A	B	C	A	B
Approach Vol, veh/h		496			555			67			147	
Approach Delay, s/veh		13.0			11.5			16.9			22.6	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.8	16.1	4.6	12.1	5.9	15.0	8.5	8.2				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.6	4.5	5.0	4.5	4.6				
Max Green Setting (Gmax), s	4.0	29.0	5.0	7.9	4.5	14.0	8.5	32.0				
Max Q Clear Time (g_c+I1), s	2.1	5.2	2.0	2.0	2.8	6.2	5.0	3.4				
Green Ext Time (p_c), s	0.0	4.0	0.0	0.0	0.0	2.2	0.1	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

8-Phase Operation
12/02/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	710	3	74	630	87	0	0	8	169	2	5
Future Volume (veh/h)	7	710	3	74	630	87	0	0	8	169	2	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	7	710	3	74	630	87	0	0	8	169	2	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	14	1131	5	102	1282	568	5	0	69	221	132	331
Arrive On Green	0.01	0.31	0.31	0.06	0.36	0.36	0.00	0.00	0.04	0.12	0.28	0.28
Sat Flow, veh/h	1810	3658	15	1810	3582	1586	1882	0	1660	1795	475	1188
Grp Volume(v), veh/h	7	348	365	74	630	87	0	0	8	169	0	7
Grp Sat Flow(s),veh/h/ln	1810	1791	1882	1810	1791	1586	1882	0	1660	1795	0	1663
Q Serve(g_s), s	0.2	6.6	6.6	1.6	5.4	1.5	0.0	0.0	0.2	3.6	0.0	0.1
Cycle Q Clear(g_c), s	0.2	6.6	6.6	1.6	5.4	1.5	0.0	0.0	0.2	3.6	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	14	554	582	102	1282	568	5	0	69	221	0	463
V/C Ratio(X)	0.52	0.63	0.63	0.73	0.49	0.15	0.00	0.00	0.12	0.77	0.00	0.02
Avail Cap(c_a), veh/h	183	787	828	251	2625	1163	238	0	1342	431	0	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	11.7	11.7	18.4	9.9	8.6	0.0	0.0	18.3	16.8	0.0	10.4
Incr Delay (d2), s/veh	10.9	1.7	1.6	3.7	0.4	0.2	0.0	0.0	0.3	5.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.2	2.3	0.7	1.6	0.4	0.0	0.0	0.1	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	13.4	13.3	22.0	10.3	8.8	0.0	0.0	18.5	22.3	0.0	10.4
LnGrp LOS	C	B	B	C	B	A	A	A	B	C	A	B
Approach Vol, veh/h		720			791			8			176	
Approach Delay, s/veh		13.5			11.2			18.5			21.8	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	19.2	0.0	15.6	6.7	17.2	9.4	6.2
Change Period (Y+Rc), s	4.5	5.0	4.5	4.6	4.5	5.0	4.5	4.6
Max Green Setting (Gmax), s	4.0	29.0	5.0	8.5	5.5	17.4	9.5	32.0
Max Q Clear Time (g_c+I1), s	2.2	7.4	0.0	2.1	3.6	8.6	5.6	2.2
Green Ext Time (p_c), s	0.0	6.2	0.0	0.0	0.0	3.7	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

8-Phase Operation
12/02/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	568	2	46	407	194	0	2	75	170	0	2
Future Volume (veh/h)	8	568	2	46	407	194	0	2	75	170	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	8	568	2	46	407	194	0	2	75	170	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	1	0	0	0	1	0	0
Cap, veh/h	15	950	3	73	1045	450	5	4	161	221	0	543
Arrive On Green	0.01	0.26	0.26	0.04	0.29	0.29	0.00	0.10	0.10	0.12	0.00	0.34
Sat Flow, veh/h	1810	3689	13	1810	3610	1553	1882	43	1614	1795	0	1603
Grp Volume(v), veh/h	8	278	292	46	407	194	0	0	77	170	0	2
Grp Sat Flow(s),veh/h/ln	1810	1805	1897	1810	1805	1553	1882	0	1657	1795	0	1603
Q Serve(g_s), s	0.2	5.2	5.2	1.0	3.5	3.9	0.0	0.0	1.7	3.6	0.0	0.0
Cycle Q Clear(g_c), s	0.2	5.2	5.2	1.0	3.5	3.9	0.0	0.0	1.7	3.6	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.97	1.00		1.00
Lane Grp Cap(c), veh/h	15	465	489	73	1045	450	5	0	166	221	0	543
V/C Ratio(X)	0.52	0.60	0.60	0.63	0.39	0.43	0.00	0.00	0.46	0.77	0.00	0.00
Avail Cap(c_a), veh/h	186	651	684	210	2697	1160	242	0	1366	393	0	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	12.6	12.6	18.3	11.0	11.2	0.0	0.0	16.5	16.5	0.0	8.5
Incr Delay (d2), s/veh	9.7	1.8	1.7	3.3	0.3	0.9	0.0	0.0	0.8	5.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.8	1.9	0.4	1.1	1.2	0.0	0.0	0.6	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	14.4	14.3	21.7	11.4	12.1	0.0	0.0	17.2	22.1	0.0	8.5
LnGrp LOS	C	B	B	C	B	B	A	A	B	C	A	A
Approach Vol, veh/h		578			647			77			172	
Approach Delay, s/veh		14.6			12.3			17.2			21.9	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	16.2	0.0	17.8	6.1	15.0	9.3	8.5
Change Period (Y+Rc), s	4.5	5.0	4.5	4.6	4.5	5.0	4.5	4.6
Max Green Setting (Gmax), s	4.0	29.0	5.0	7.9	4.5	14.0	8.5	32.0
Max Q Clear Time (g_c+I1), s	2.2	5.9	0.0	2.0	3.0	7.2	5.6	3.7
Green Ext Time (p_c), s	0.0	4.8	0.0	0.0	0.0	2.4	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

8-Phase Operation
12/02/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	710	4	75	630	87	0	0	5	169	2	5
Future Volume (veh/h)	7	710	4	75	630	87	0	0	5	169	2	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	7	710	4	75	630	87	0	0	5	169	2	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	1	0	0	0	1	0	0
Cap, veh/h	14	1132	6	103	1287	570	5	0	64	221	131	328
Arrive On Green	0.01	0.31	0.31	0.06	0.36	0.36	0.00	0.00	0.04	0.12	0.28	0.28
Sat Flow, veh/h	1810	3652	21	1810	3582	1586	1882	0	1660	1795	475	1188
Grp Volume(v), veh/h	7	348	366	75	630	87	0	0	5	169	0	7
Grp Sat Flow(s),veh/h/ln	1810	1791	1881	1810	1791	1586	1882	0	1660	1795	0	1663
Q Serve(g_s), s	0.2	6.6	6.6	1.6	5.4	1.5	0.0	0.0	0.1	3.6	0.0	0.1
Cycle Q Clear(g_c), s	0.2	6.6	6.6	1.6	5.4	1.5	0.0	0.0	0.1	3.6	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	14	555	583	103	1287	570	5	0	64	221	0	459
V/C Ratio(X)	0.52	0.63	0.63	0.73	0.49	0.15	0.00	0.00	0.08	0.77	0.00	0.02
Avail Cap(c_a), veh/h	183	790	830	252	2633	1166	238	0	1346	432	0	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	11.7	11.7	18.3	9.8	8.6	0.0	0.0	18.3	16.8	0.0	10.4
Incr Delay (d2), s/veh	10.9	1.7	1.6	3.7	0.4	0.2	0.0	0.0	0.2	5.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.2	2.3	0.7	1.6	0.4	0.0	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	13.3	13.2	22.0	10.2	8.7	0.0	0.0	18.5	22.2	0.0	10.4
LnGrp LOS	C	B	B	C	B	A	A	A	B	C	A	B
Approach Vol, veh/h		721			792			5			176	
Approach Delay, s/veh		13.4			11.2			18.5			21.8	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	19.2	0.0	15.5	6.7	17.2	9.3	6.1
Change Period (Y+Rc), s	4.5	5.0	4.5	4.6	4.5	5.0	4.5	4.6
Max Green Setting (Gmax), s	4.0	29.0	5.0	8.5	5.5	17.4	9.5	32.0
Max Q Clear Time (g_c+I1), s	2.2	7.4	0.0	2.1	3.6	8.6	5.6	2.1
Green Ext Time (p_c), s	0.0	6.2	0.0	0.0	0.0	3.7	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
1: Dublin Boulevard & Hansen Drive

8-Phase Operation
12/02/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	568	3	47	407	194	1	2	76	170	0	2
Future Volume (veh/h)	8	568	3	47	407	194	1	2	76	170	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1976	1976	1976	1885	1900	1900
Adj Flow Rate, veh/h	8	568	3	47	407	194	1	2	76	170	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	1	0	0	0	1	0	0
Cap, veh/h	15	946	5	74	1045	450	5	4	163	221	0	356
Arrive On Green	0.01	0.26	0.26	0.04	0.29	0.29	0.00	0.10	0.10	0.12	0.00	0.22
Sat Flow, veh/h	1810	3682	19	1810	3610	1553	1882	42	1615	1795	0	1599
Grp Volume(v), veh/h	8	278	293	47	407	194	1	0	78	170	0	2
Grp Sat Flow(s),veh/h/ln	1810	1805	1896	1810	1805	1553	1882	0	1657	1795	0	1599
Q Serve(g_s), s	0.2	5.3	5.3	1.0	3.5	3.9	0.0	0.0	1.7	3.6	0.0	0.0
Cycle Q Clear(g_c), s	0.2	5.3	5.3	1.0	3.5	3.9	0.0	0.0	1.7	3.6	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.97	1.00		1.00
Lane Grp Cap(c), veh/h	15	464	487	74	1045	450	5	0	168	221	0	356
V/C Ratio(X)	0.52	0.60	0.60	0.63	0.39	0.43	0.21	0.00	0.47	0.77	0.00	0.01
Avail Cap(c_a), veh/h	186	649	682	209	2690	1158	242	0	1363	392	0	356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	12.7	12.7	18.4	11.1	11.2	19.4	0.0	16.5	16.5	0.0	11.8
Incr Delay (d2), s/veh	9.7	1.8	1.7	3.3	0.3	0.9	19.9	0.0	0.7	5.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.9	1.9	0.4	1.1	1.2	0.0	0.0	0.6	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	14.5	14.4	21.7	11.4	12.2	39.3	0.0	17.2	22.1	0.0	11.8
LnGrp LOS	C	B	B	C	B	B	D	A	B	C	A	B
Approach Vol, veh/h		579			648			79			172	
Approach Delay, s/veh		14.6			12.4			17.5			22.0	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	16.3	4.6	13.3	6.1	15.0	9.3	8.5
Change Period (Y+Rc), s	4.5	5.0	4.5	4.6	4.5	5.0	4.5	4.6
Max Green Setting (Gmax), s	4.0	29.0	5.0	7.9	4.5	14.0	8.5	32.0
Max Q Clear Time (g_c+I1), s	2.2	5.9	2.0	2.0	3.0	7.3	5.6	3.7
Green Ext Time (p_c), s	0.0	4.8	0.0	0.0	0.0	2.4	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Appendix D

Truck Turning Templates

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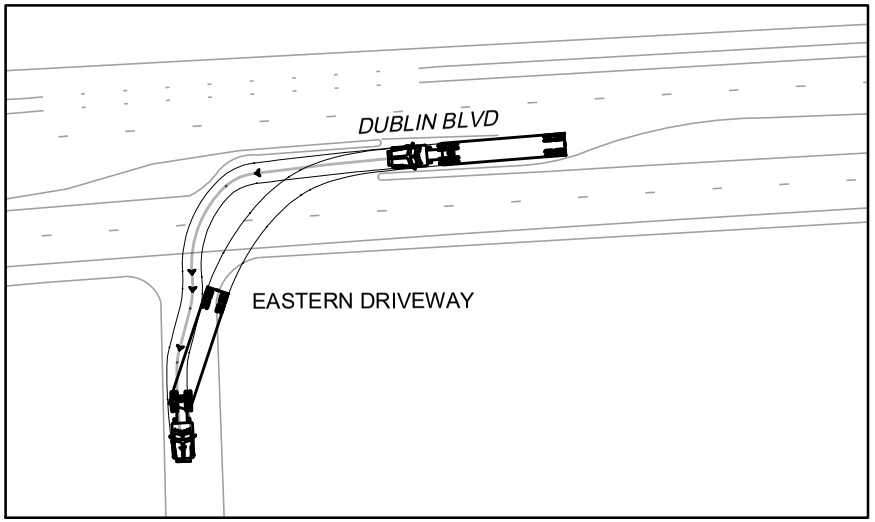
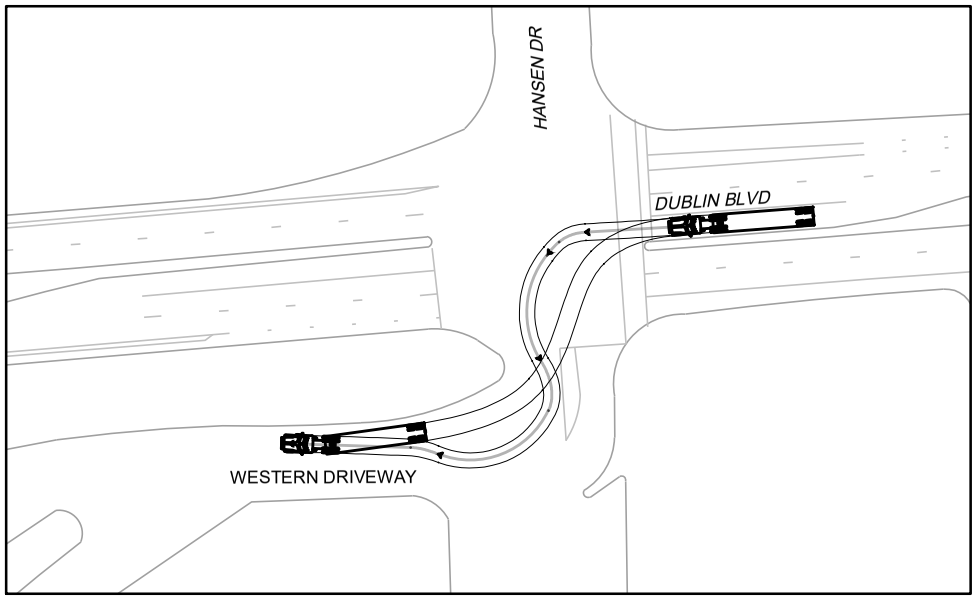
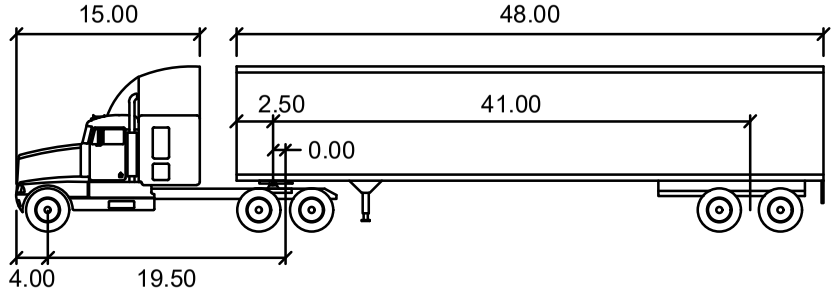
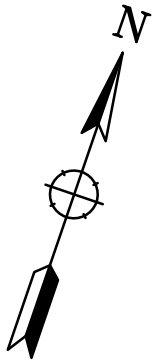






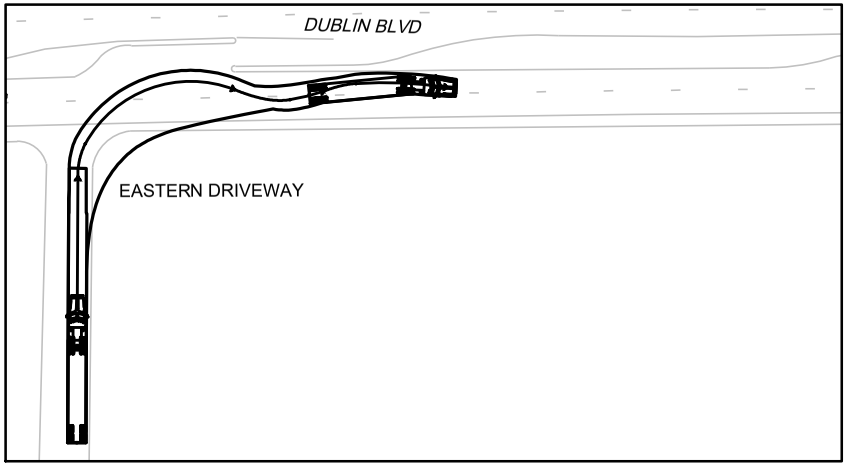
WB-62

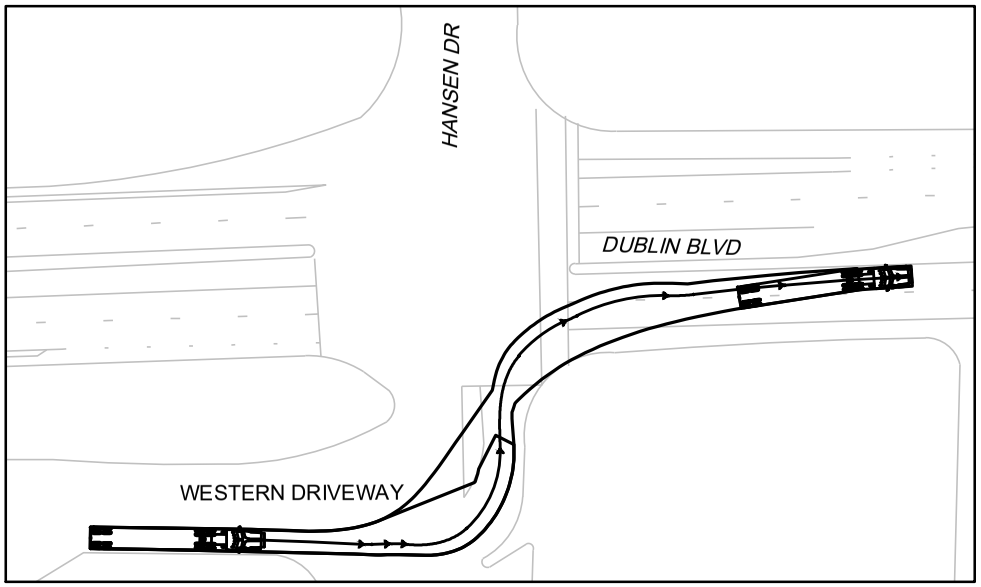
	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

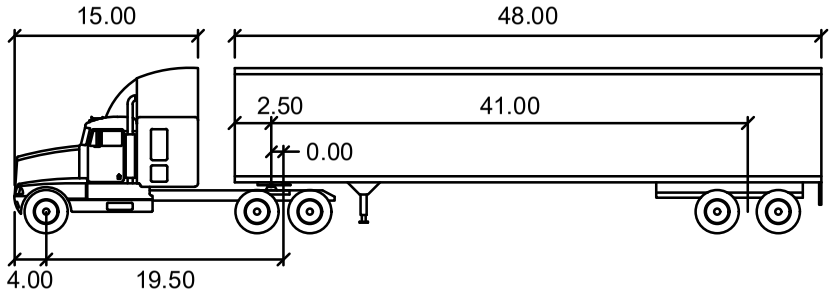


W-Trans

AutoTURN – ENTERING SITE DRIVEWAYS



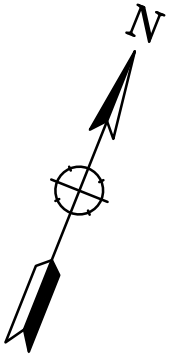




WB-62

feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



W-Trans

AutoTURN – EXITING SITE DRIVEWAYS

Memorandum

Date: April 6, 2023

Project: DUB900-2

To: Mr. Oliver Castillo, EIT
Assistant Civil Engineer
City of Dublin

From: Kenny Jeong, PE
kjeong@w-trans.com

Subject: Hexcel Redevelopment Project Transportation Impact Study Addendum

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As requested, W-Trans has prepared a revised trip generation and parking analysis relative to the proposed redevelopment of the Hexcel facility located at 11711 Dublin Boulevard in the City of Dublin.

Revised Project Description

The project site plan has recently been updated and now consists of 18,000 square feet of office space, 30,000 square feet of light industrial space and 77,304 square feet of warehouse use with 217 parking spaces. This represents a change from the previous project description as depicted in the *Transportation Impact Study for the Hexcel Redevelopment Project*, December 12, 2022, W-Trans (TIS), which provided an analysis of a project comprised of 18,000 square feet of office use, 36,500 square feet of light industrial space and 70,804 square feet of warehouse uses with 227 parking spaces. It is noted that the overall size of the proposed project has remained constant at 125,304 square feet in both the project as evaluated in 2022 and the current proposal. A copy of the revised site plan is enclosed.

Revised Trip Generation

According to the trip generation estimates documented in the TIS, the proposed project would result in a net reduction of 201 trips on a daily basis from the prior Research and Development uses, with an increase of 1 net new trip during the morning peak hour and 2 net new trips during the evening peak hour. The project as currently proposed would be comprised of slightly different square footage estimates of internal uses which would result in a net decrease of 21 daily trips, including 4 fewer a.m. peak hour trips and 3 fewer p.m. peak hour trips compared to the project as evaluated in the 2022 TIS. A summary of these changes is shown in Table 1.

Table 1 –Trip Generation Summary (December 2022)

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
	(ksf)	Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing											
Research & Dev	-62.715	11.08	-695	1.03	-65	-53	-12	0.98	-61	-10	-51
Proposed (December 2022)											
Offices	18.000	10.84	195	1.52	27	24	3	1.44	26	4	22
Light Industrial	36.500	4.87	178	0.74	27	24	3	0.65	24	3	21
Warehousing	70.804	1.71	121	0.17	12	9	3	0.18	13	4	9
Proposed 2022 Subtotal	*125.304*		*494*		*66*	*57*	*9*		*63*	*11*	*52*
Total (Proposed 2022 less Existing)			**-201**		**1**	**4**	**-3**		**2**	**1**	**1**
Proposed (April 2023)											
Offices	18.000	10.84	195	1.52	27	24	3	1.44	26	4	22
Light Industrial	30.000	4.87	146	0.74	22	19	3	0.65	20	3	17
Warehousing	77.304	1.71	132	0.17	13	10	3	0.18	14	4	10
Proposed 2023 Subtotal	*125.304*		*473*		*62*	*53*	*9*		*60*	*11*	*49*
Total (Proposed 2023 less Existing)			**-222**		**-3**	**0**	**-3**		**-1**	**1**	**-2**

Note: ksf = 1,000 square feet

Finding – Since the currently proposed project is expected to generate slightly fewer vehicle trips than were used in the analysis presented in the *Transportation Impact Study for the Hexcel Redevelopment Project* (2022), the project's effect on intersection Level of Service (LOS) and queuing would be similar to the results presented for the prior analysis. The results as presented in the prior Transportation Impact Study would therefore continue to adequately represent the project as currently proposed, and as no changes to the findings would be expected, a comprehensive update of the prior traffic analysis is unnecessary.

Revised Parking Analysis

An update to the expected demand and City code requirements using the current (2023) proposed land uses is summarized in Table 2. According to these estimates, the revised proposed parking supply of 217 spaces is anticipated to adequately accommodate the estimated peak parking demand of 93 spaces and would satisfy the City Code requirement of 217 spaces. For informational purposes, a copy of the previous summary is also provided in Table 2.

Table 2 – Revised Parking Analysis Summary

Land Use	Units (ksf)	Supply (spaces)	City Requirements		ITE Parking Generation	
			Rate	Spaces Required	Rate (per ksf)	Est. Parking Demand
Proposed (December 2022)						
Offices	12.000 6.000	227	1 per 0.25 ksf 1 per 0.3 ksf	30 35	2.39	43
Light Industrial	36.500		1 per 0.4 ksf	91	0.65	24
Warehousing	70.804		1 per 1 ksf	71	0.39	28
Total (2022)	**125.304**	**227**		**227**		**95**
Proposed (April 2023)						
Offices	12.000 6.000	217	1 per 0.25 ksf 1 per 0.3 ksf	30 35	2.39	43
Light Industrial	30.000		1 per 0.4 ksf	75	0.65	20
Warehousing	77.304		1 per 1 ksf	77	0.39	30
Total (2023)	**125.304**	**217**		**217**		**93**

Note: ksf = 1,000 square feet

The Uniform Building Code and the Federal Accessibility Guidelines include minimum requirements disabled parking. The site plan shows that out of 217 spaces available at the proposed project, there are eight stalls designated for disabled persons' use (including two spaces with the added designation for electric vehicles only). Based on requirements stipulated by the Federal Accessibility Guidelines, seven accessible stalls are required. Thus, the proposed project would comply with the Federal Accessibility Guidelines.

Finding – The proposed parking supply would satisfy the City of Dublin's parking requirements and accommodate the anticipated parking demand. The supply of eight accessible stalls proposed for the project is greater than the seven stalls required.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

MES/kbj/DUB900-2.M1

Enclosures: Revised Site Plan

SITE AREA	
In s.f.	383,598 s.f.
In acres	8.81 ac
BUILDING AREA	
Office - 1st floor	12,000 s.f.
Office - 2nd floor	6,000 s.f.
Light Industrial	30,000 s.f.
Warehouse (Accessory to Light Industrial Use)	77,304 s.f.
TOTAL	125,304 s.f.
FAR	
Maximum allowed	0.40
Actual	0.33
AUTO PARKING REQUIRED	
Office: 0-7.5k s.f. (1/ 250 s.f.)	30 stalls
7.5k s.f. - 40k s.f. (1/ 300 s.f.)	35 stalls
Light Industrial : 1/400 s.f.	75 stalls
Whse (Accessory to Light Industrial Use) : 1/1000 s.f.	77 stalls
TOTAL	217 stalls
EV AUTO REQUIRED	
EV Capable (45% of total parking)	98 stalls
~ EV capable without EVSE (67%)	[66] stalls
~ EV capable with EVSE (33%)	[32] stalls
~ ADA EV Parking (9' x 20' + 5' Aisle)	(1) stalls
~ ADA EV Van Parking (12' x 20' + 5' Aisle)	(1) stalls
~ Ambulatory (10' x 20' + 2' O.H.)	(1) stalls
ACCESSIBLE PARKING REQUIRED	
Total Auto Provided	217 stalls
EV Auto with EVSE	32 stalls
Auto to use for ADA Calculation (Total Auto - EV Auto w/ EVSE)	185 stalls
ADA Parking (9' x 20' + 5' Aisle)	3 stalls
ADA Van Parking (12' x 20' + 5' Aisle)	3 stalls
AUTO PARKING PROVIDED	
Standard (9' x 18' + 2' O.H.)	54 stalls
Compact (8' x 15' + 2' O.H.) (Max. 35% of required auto parking)	59 stalls
ADA Parking (9' x 20' + 5' Aisle)	3 stalls
ADA Van Parking (12' x 20' + 5' Aisle)	3 stalls
EV Capable (45% of total parking)	98 stalls
~ EV capable without EVSE (67%)	[66] stalls
- Standard EV without EVSE (9' x 18' + 2' O.H.)	(45) stalls
- Compact EV without EVSE (8' x 10' + 2' O.H.) (Max. 35% of required EV)	(21) stalls
~ EV capable with EVSE (33%)	[32] stalls
- ADA EV Parking (9' x 20' + 5' Aisle)	(1) stalls
- ADA EV Van Parking (12' x 20' + 5' Aisle)	(1) stalls
- Ambulatory (10' x 20' + 2' O.H.)	(1) stalls
Total	217 stalls
BICYCLE PARKING REQUIRED	
Long Term (min. 5% of Auto Parking)	11 stalls
Short Term (min. 5% of Auto Parking)	11 stalls
Total	22 stalls
BICYCLE PARKING PROVIDED	
Long Term (min. 5% of Auto Parking)	12 stalls
Short Term (min. 5% of Auto Parking)	12 stalls
Total	24 stalls

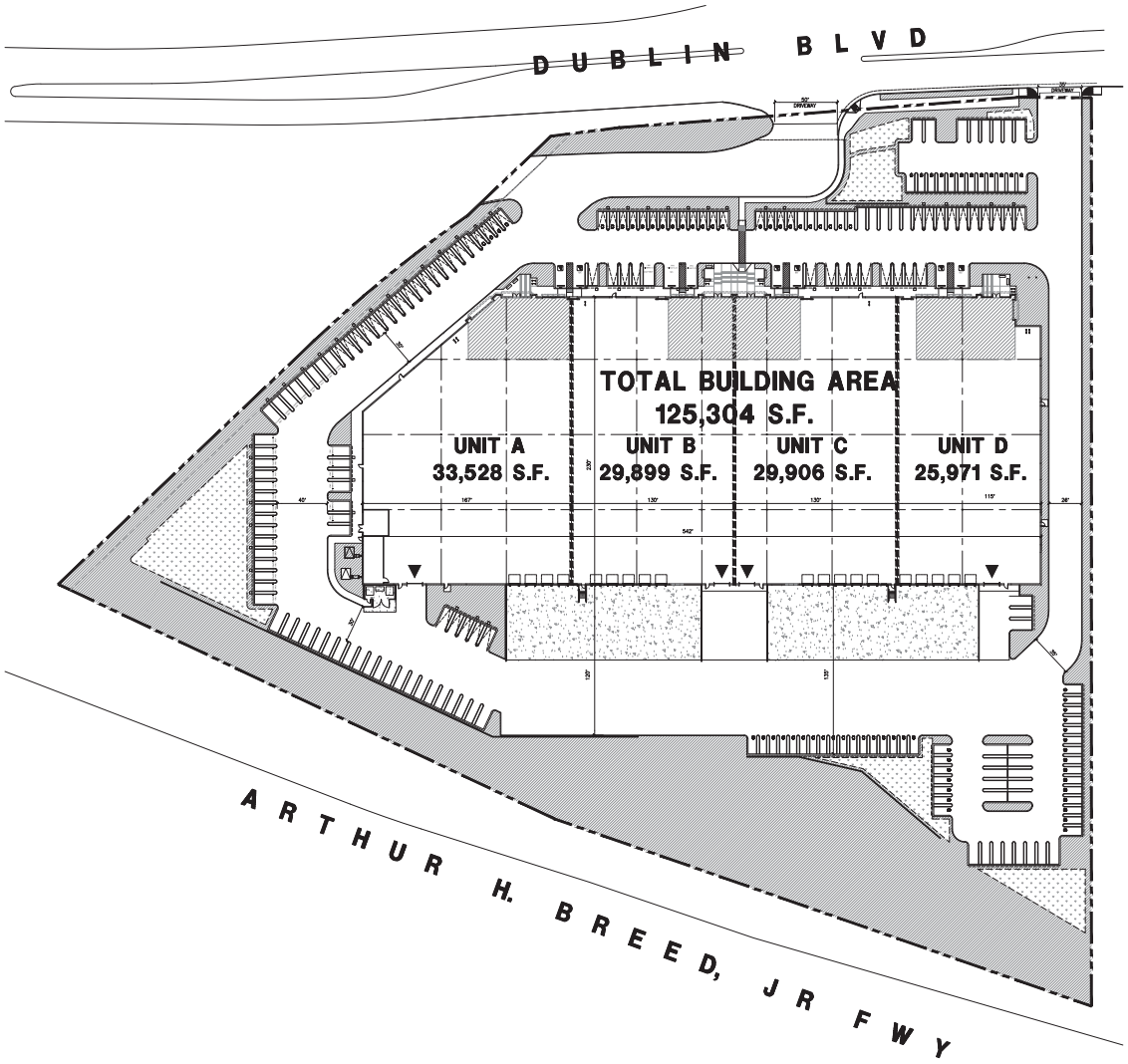
ZONING ORDINANCE FOR CITY

Zoning Designation - Light Industrial Zoning (M-1)

MAXIMUM BUILDING HEIGHT ALLOWED

Height - 45'

SETBACKS

Building

Front/ Street Side - 10'