Initial Study

South Main Mixed-Use Project

Prepared for:

City of Redwood City

Prepared by:

AECOM

July 2019

Table of Contents

List of Figures

List of Tables

List of Appendices

Acronyms and Abbreviations

AB	Assembly Bill
ACM	asbestos-containing materials
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
bgs	below ground surface
BMP	best management practices
CCR	California Code of Regulations
Cal-EPA	California Environmental Protection Agency
Cal-OSHA	California Occupational Safety and Health Administration
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CH_4	Methane
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	Carbon dioxide-equivalents
CRHR	California Register of Historical Resources
CWP	Clean Water Program
dBA	A-weighted sound levels
DOF	California Department of Finance
DTPP	Downtown Precise Plan
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
General Permit	Statewide General Construction Activities Stormwater Permit
GHG	greenhouse gas
GWP	global warming potential
I-680	Interstate 680
I-880	Interstate 880
LBP	lead-based paint
mgd	million gallons per day
MULW	Mixed Use Live/Work
N_2O	nitrous oxide

NAHC	Native American Heritage Commission
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NWIC	Northwest Information Center
OSHA	federal Occupational Health and Safety Administration
PM	particulate matter
PM_{10}	particulate matter equal to or less than 10 micrometers in diameter
$PM_{2.5}$	particulate matter equal to or less than 2.5 micrometers in diameter
PPV	peak particle velocity
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SFBAAB	San Francisco Bay Area Air Basin
SO_2	sulfur dioxide
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USGS	United States Geological Survey
VdB	vibration decibels

1. Introduction

1. Project Title:	South Main Mixed-Use Development Project
2. Lead Agency Name and Address:	Redwood City Community Development Department, 1017 Middlefield Road, Redwood City, CA 94063
3. Lead Agency Contact:	Lindy Chan, Principal Planner Phone: (650) 780-7237 Email: lchan@redwoodcity.org
4. Project Location:	8.3 acres generally located between El Camino Real, Maple, Cedar, and Main Streets and an offsite affordable housing development at 1304 El Camino Real (at Jackson Avenue), referred to herein as 1601 El Camino Real (Parcels A -E) and 1304 El Camino Real (Parcel F), Redwood City, CA 94063
5. Assessor Parcel Number(s):	053-182-020, 053-182-040, 053-185-060, 053-185-070, 053-185-040, 053-185-050, 053-184-050, 053-184-040, 053-184-030, 053-184-020, 053-184-010, 053-181-070, 053-181-110, 053-181-080, 053-181-090, 053-181-100, 053-186-010, 053-183-010, 053-183-020; 053-063-070
6. Project Sponsor's Name and Address:	Greystar Development, Jonathan Fearn 1526 Main Street, Redwood City, CA 94063
7. General Plan Designation(s):	Mixed Use- Corridor (60 DU/AC Max.) Mixed Use- Live/Work (20 DU/AC Max.) Mixed Use – Downtown (no site specific density)
8. Zoning Designation(s):	MUC-ECR (Mixed Use Corridor – El Camino Real) MULW (Mixed-Use – Live/Work) DTPP (Downtown Precise Plan)

2. Project Description

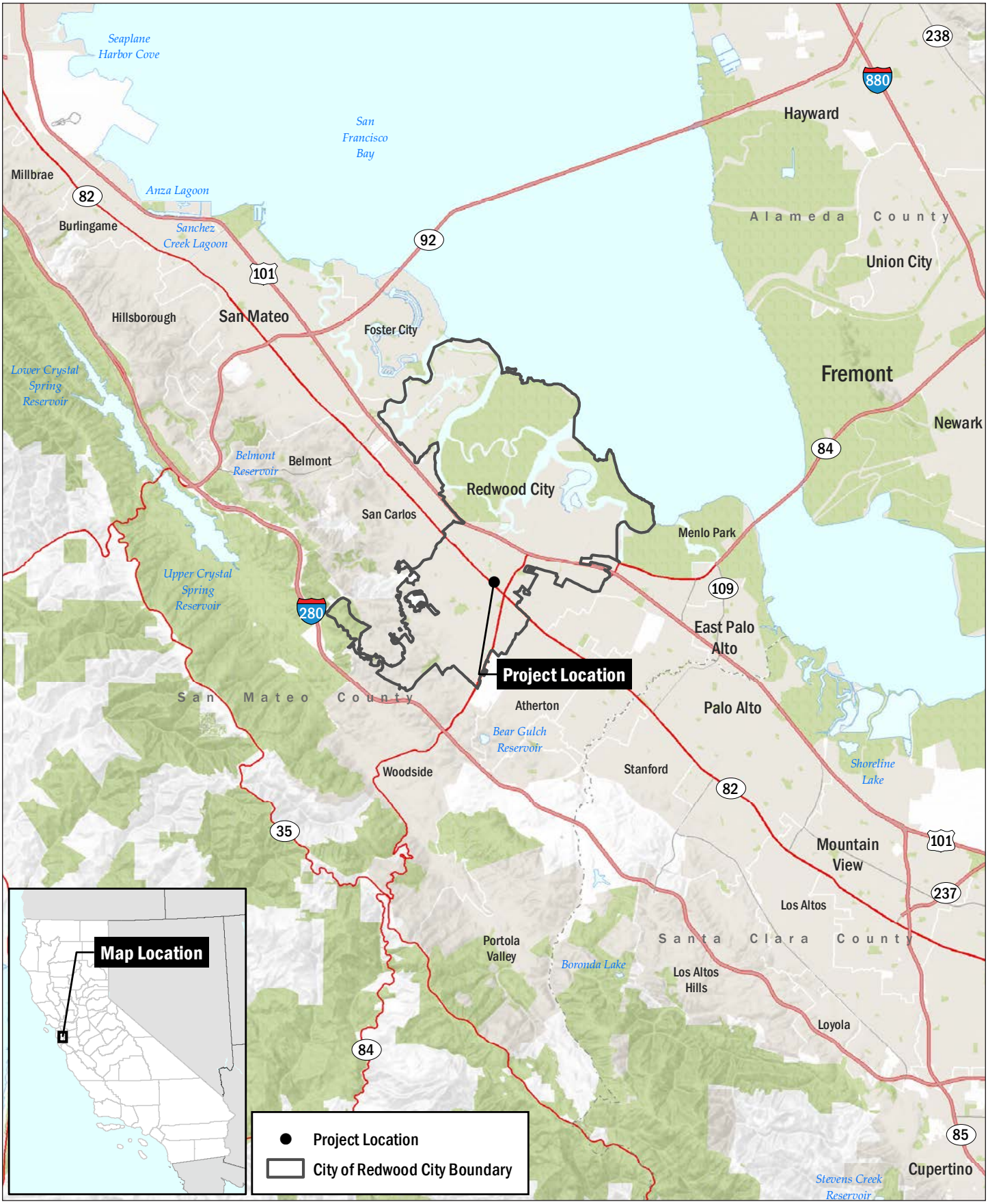
2.1 Project Site and Vicinity

The project site is located in the City of Redwood City at the periphery of the City's Downtown core (Figure 2.1 – Project Location) and is composed of five contiguous blocks totaling 8.30 acres (Parcels A through E) and one separate block of approximately 0.15 acre (Parcel F). Parcels A through E are bounded by El Camino Real, Maple Street, Elm Street, Main Street, Caltrain right-of-way, Chestnut Street, Shasta Street, and Cedar Street (Figure 2.2 – Project Site). Parcel F is approximately 1,000 feet northwest of Parcels A through E at the southwest corner of El Camino Real and Jackson Avenue. Lathrop Street and Main Street run through Parcels A through E in a north-south direction and Beech Street in an east-west direction. These parcels are regionally accessible via State Route (SR) 84, located 300 feet to the southeast of the project site; and the SR 84/US 101 interchange, located about 1 mile to the northeast. Local access to the project site is via El Camino Real, which fronts the project site. The project site is in a transit-rich area: Parcels A through E are approximately 0.5 mile from the Redwood City Transit Center, and one block from the nearest SamTrans bus stop; Parcel F is in the City's Downtown core, approximately 0.3 mile southeast of the Redwood City Transit Center.

Existing use of the project site is primarily auto sales, repair, and warehouse space, including one multi-tenant residential building owned by the City of Redwood City, a restaurant, and a former indoor roller rink. Uses surrounding the site include auto repair shops, small commercial buildings, large multi-tenant residential developments, some retail, and a proposed 109,000-square foot office building.

The project site's six blocks are currently developed and configured as follows (Figure 2.2 – Project Site):

- **Parcel A** is made up of two existing parcels, totaling about 1.68 acres, and occupying the entire block. Parcel A is bounded by El Camino Real to the west, a concrete-lined drainage channel (Redwood Creek) and Maple Street to the north, Lathrop Street to the east, and Beech Street to the south. The site is currently occupied by a car dealership with existing buildings in the western 25%, and asphalt-paved parking lots covering the remainder of the site.
- **Parcel B** is made up of four existing parcels, totaling about 1.39 acres, and is bounded by El Camino Real to the west, Beech Street to the north, Lathrop Street to the east, and Cedar Street to the south. The site is currently occupied by a car dealership and service buildings that cover about 65% of the site, with asphalt-paved parking lots in the southwestern and northwestern portions of the site.
- **Parcel C** is made up of five existing parcels, totaling about 1.50 acres. The site is bounded by Lathrop Street to the west, Beech Street to the north, Main Street to the east, and Cedar Street to the south. The site is currently occupied by an existing auto body shop building in the southwestern corner, covering about 25% of the site, with asphalt-paved parking lots covering the remainder of the site. A portion of the parcel is occupied by a City-owned multi-family development, with 22 below-market-rate units and a managers unit.
- **Parcel D** is an L-shaped parcel totaling about 1.27 acres. Parcel D encompasses approximately 80% of the block bounded by Lathrop Street to the west, Elm Street to the north, commercial properties to the east, and Beech Street to the south. The site is occupied by an asphalt-paved parking lot with a detailing shop on the southern end, as well as a restaurant, car storage, and office space that is not occupied. Parcel D does not include the four one-story buildings at the northeastern portion of this block.



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Data Source: ESRI, 2019.

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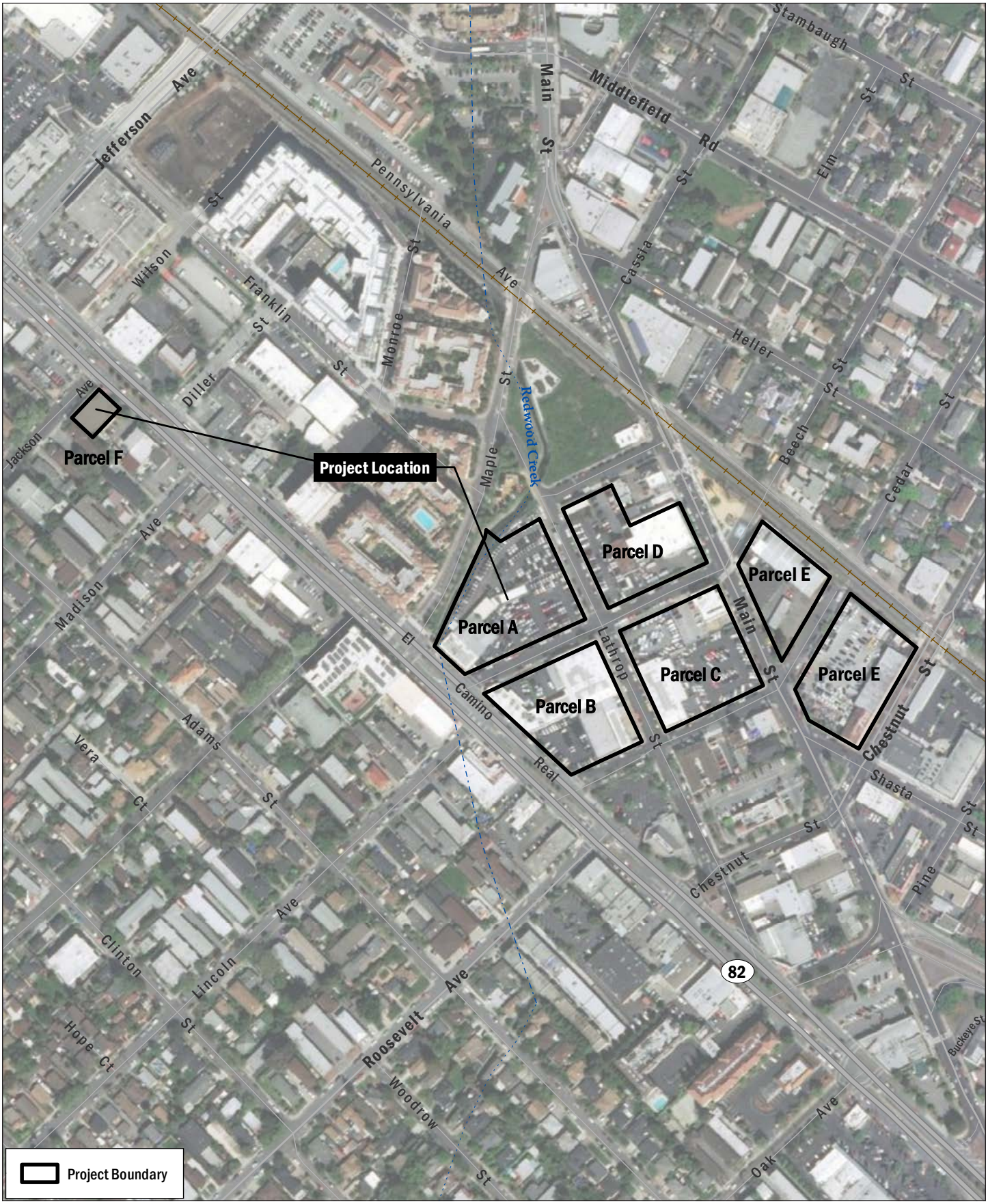
PROJECT LOCATION

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.1



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Data Source: ESRI, 2019.

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PROJECT SITE

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.2

- **Parcel E** is made up three existing parcels, totaling about 2.46 acres and occupying the entire block. The site is bounded by Main Street to the west, Beech Street to the north, the Caltrain railroad tracks to the northeast, Chestnut Street to the southeast, and Shasta Street to the south. Parcel E is bisected by Cedar Street. The site is predominantly occupied by an asphalt-paved parking lot, and a commercial/industrial building along the southeastern edge of the property that covers less than 20% of the site. A former roller rink, car wash, and historic-era metal shed are also on this parcel.
- **Parcel F** is made up of one existing parcel, totaling 0.15 acre and occupying the northeastern corner parcel of the block at 1304 El Camino Real. The site is bounded by El Camino Real to the east, Jackson Avenue to the north, and existing development to the west and south. The development to the south is a historic resource (labeled as "R" in the Downtown Precise Plan [DTPP]). The site is occupied by a former auto repair building that covers a majority of the site.

2.2 Existing Land Use

Parcels A and B are designated by the General Plan, and zoned Mixed-Use Corridor – El Camino Real (MUC-ECR). Parcels C, D, and E are in the Mixed Use Live/Work (MULW), and Parcel F is in the DTPP /Mixed-Use Downtown General Plan and zoning designation. The MUC-ECR designation is intended to support major transit and complementary commercial and residential uses, encouraging transit use, bicycle use, and pedestrian activity. The MULW designation is intended to facilitate a creative mix of residences and low-intensity workplaces. Live/work environments combine residential occupancy with commercial activity in the same building space. The DTPP designation is intended to stimulate development in the City's Downtown core. All parcels are currently occupied by existing uses, as shown in Table 2.1, and in Figure 2.3 – Existing Uses.

Table 2.1 Existing Uses

Parcel	Parcel SF	Address	APN	APN SF	Building SF	Existing Use
Parcel A						
	80,538	1555 ECR	053-182-020	21,066	9,972	Hopkins Acura
		1555 ECR	053-182-040	52,278	992	Hopkins Acura
Parcel B						
	54,292	1601 ECR	053-185-060	43,338	34,798	Towne Ford
		1635 ECR	053-185-070	9,287	-	Towne Ford
		1679 ECR	053-185-040	3,001	-	Towne Ford
		1679 ECR	053-185-050	5,153	-	Towne Ford
Parcel C						
	65,132	111 Cedar	053-184-050	19,963	9,541	Towne Auto Body
		--	053-184-040	12,576	-	Towne Ford car storage
		--	053-184-030	11,273	-	Towne Ford car storage
		--	053-184-020	6,736	-	Towne Ford car storage
		1306 Main	053-184-010	12,491	11,673	22 BMR + 1 manager's unit (4 units occupied)

Parcel	Parcel SF	Address	APN	APN SF	Building SF	Existing Use
Parcel D						
	55,394	113 Beech	053-181-070	4,961	2,999	Auto repair (California Detail, Inc.)
		121 Beech	053-181-110	22,717	26,254	Office – for lease
		101 Lathrop	053-181-080	16,139	1,563	Auto storage (Towne Ford)
		112 Elm	053-181-090	8,333	-	Restaurant parking (Main & Elm)
		150 Elm	053-181-100	3,589	1,204	Restaurant (Main & Elm)
Parcel E						
	107,361	1303 Main	053-183-010	23,204	15,120	Entertainment – for lease (formerly Redwood Roller Rink)
		1385 Main	053-183-020	11,374	1,408	Car wash (Main St. Self-Serve Car Wash)
		Cedar St.	N/A	15,438	-	Street w/City right-of-way easement
		1401 Main	053-186-010	57,345	11,262	Auto storage (historic-era shed)
Parcel F						
	6,510	1304 El Camino Real	053-063-070	6,510	-	Auto repair (formerly Precision Tune Auto Care)

Source: Greystar 2018

2.3 Surrounding Land Uses

The project site is surrounded by commercial and residential uses. The area north of Parcel A is occupied by a large residential development. Across El Camino Real, there are multiple one-story commercial buildings, and a five-story mixed-use residential development at the corner of El Camino and Maple Street. Commercial development is located south of Parcels B and E, while the Caltrain tracks border the project to the east of Parcel E. A small, City-owned and-operated dog park is to the north of Parcel E, adjacent to the train tracks and Maple Street. Redwood Creek, which is channelized in the project area, borders Parcel A to the north. Parcel F is surrounded by commercial and residential uses, typically two-story buildings, with a recently completed seven-story residential development directly across El Camino Real.

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Source: WRNS STUDIO, 2019.

EXISTING USES

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City of Redwood City, California

FIGURE 2.3

2.4 Project Characteristics

The proposed project would include one building each on Parcel A and F, developed with primarily residential uses; and five additional buildings on Parcels B through E, where the primary use would be commercial office (Figure 2.4 – Proposed Project Site). The proposed project would develop 291 multi-family residential units, including 252 units on Parcel A, and 39 units on Parcel F. The project would also include approximately 550,000 square feet of office uses, an 8,500-square-foot childcare facility (not including 5,800 square feet of dedicated outdoor space), and 28,000 square feet of retail uses, including 19,000 square feet of ground-floor space on Parcel B designed to accommodate retail-entertainment uses. The approximately 40,000 square feet of public open space proposed throughout the site would include a public creek walk, and park at Shasta Street and Chestnut Street.

The following general land uses would be constructed at each parcel:

- **Parcel A** – multifamily residential uses and retail, public and private open space.
- **Parcel B** – retail and office space, along with a childcare facility and family-oriented entertainment/retail.
- **Parcel C** – office space and private open space.
- **Parcel D** – office space and private open space.
- **Parcel E** – office space, retail, and public and private open space.
- **Parcel F** – multifamily residential uses.

2.4.1 Residential

The project would include 291 total residential units composed of a mix of Studios, Junior 1-bedroom (BR), 1BR, 2BR, and 3BR units ranging in size from approximately 525 square feet to approximately 1,283 square feet, as shown in Table 2.2 below. Parcel A would have 252 units, developed in a seven-story building approximately 84 feet high. The Parcel A residential development would provide 38 units for low-income and 21 units to moderate-income households.

The applicant would also develop 39 residential units on the separate Parcel F site at 1304 El Camino Real, approximately 1,000 feet northwest of the primary project site. This additional Parcel F development would replace the existing 22 very low-income units on the City-owned portion of Parcel C and provide an additional 16 very-low-income units and a manager's unit. The gross total of 97 affordable units includes 22 replacement units that the project would be required to rebuild as part of the City's 1:1 replacement if the applicant acquires the affordable housing at 1306 Main Street. Therefore, the project would net 75 new affordable units, equal to approximately 25% of the total proposed residential units.

Table 2.2 Proposed Residential Units on Parcels A and F

Unit Type	Quantity
Studio	64 Parcel A
	30 Parcel F
Junior 1 bedroom	71 Parcel A
1 bedroom	65 Parcel A
	8 Parcel F
1-bedroom townhouse	7 Parcel A
2 bedrooms	40 Parcel A
	1 Parcel F
3 bedrooms	5 Parcel A
Total Residential	**291**

Source: Greystar 2018

2.4.2 Office

The project would include approximately 550,000 square feet of office space in five separate buildings on Parcels B, C, D, and E, as shown in Table 2.3.

Table 2.3 Proposed Office Space

Parcel	Office Square Feet
Parcel B	110,329
Parcel C	130,264
Parcel D	110,788
Parcel E	198,762
Total Office	**550,143**

Source: Greystar 2018

Source: WRNS STUDIO, 2019.

PROPOSED PROJECT SITE

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.4

2.4.3 Retail and Childcare Uses

The project would include approximately 28,000 square feet of retail and 8,500 square feet dedicated to a public childcare facility, as shown in Table 2.4. The ground-floor building on Parcel B fronting El Camino Real would have 19,000 square feet of flexible space to accommodate a range of possible family friendly entertainment uses such as bowling, laser tag, and a roller rink, among others.

Table 2.4 Proposed Retail and Childcare Space

Parcel	Proposed Uses	Square Feet
Parcel A	Retail	4,289
Parcel B	Childcare	8,563
	Entertainment	18,878
Parcel E	Retail	4,571

Source: Greystar 2018

2.4.4 Open Space

The project would include a mix of public and private open space on all of the parcels, as shown in Table 2.5, below. The private open space would be available to building occupants only, while the public open space would be open to the public at large. The public open space would include green space and sitting areas, as well as sitting areas associated with the commercial space. Parcel E would contain dedicated open space at the site of Perry's Feed Shed.

Table 2.5 Proposed Open Space

Parcel	Open Space Type	Square Feet
Parcel A	Public	10,933
	Private/Residential	31,510
Parcel B	Public	2,421
	Childcare	5,762
	Private	6,583
Parcel C	Public	1,859
	Private	3,579
Parcel D	Public	3,658
	Private	4,055
Parcel E	Public	21,273
	Private	7,773

Source: Greystar 2018

Proposed open space on Parcel A would include a publicly accessible landscaped walkway parallel to Maple Street between El Camino Real and Lathrop Street along the southern side of Redwood Creek. This walkway would serve as pedestrian-friendly connection between Downtown and the neighborhoods west of El Camino Real. The walkway would also serve as the trailhead for the City's envisioned intra-City

creek trail network. In addition, proposed improvements along Lathrop Street, such as bike routes and pedestrian crosswalks with bulb-outs, would de-emphasize automobile traffic and encourage pedestrian and bicycle circulation between El Camino Real and Main Street. The project would also include a pedestrian and bicycle path on Lathrop Street extending the existing sidewalk in the project area to Maple Street. The path would be approximately 8 feet wide on the west side of Lathrop Street. In addition, the project would extend the sidewalk at El Camino Real and Maple Street by approximately 10 feet over Redwood Creek to provide connectivity to the Downtown core.

Parcel E along Main Street would include public open space. The project would close Shasta Street between Main and Chestnut Streets to expand on the existing traffic island to create a public open space. The project would also include a pedestrian walkway along the northeast side of Parcel E, parallel to the Caltrain alignment, which would provide access to the existing dog park from Chestnut Street. As part of the public open space, the project would demolish the existing Perry's Feed Shed building, located at Shasta and Chestnut Streets, and rebuild a replicate structure for public commercial use.

The project would also include improvements to the parcel at Lathrop and Maple Streets (just outside of the project site) to facilitate the creation of a community garden.

2.4.5 Relocation

There are four units currently occupied in the 22-unit residential development at 1306 Main Street. The project applicant has proposed purchasing this parcel from the City; and if acquired, constructing replacement units on Parcel F, consistent with Redwood City's housing requirement for 1:1 replacement of affordable residential units. Acquisition of the 1306 Main Street parcel is among the requested project approvals. Consistent with Department of Housing and Urban Development regulations for relocation, if the acquisition is approved, the project applicant would provide relocation assistance to the City, and the City would then manage the relocation of the residents prior to demolition.

2.4.6 Site Design

The project would demolish all existing buildings on the six project parcels A through F. The project would incorporate landscaping throughout the project site, as outlined in Appendix PLANS. As described below, Parcels A through D would be developed with one structure each, and Parcel E would have two structures (Figure 2.5). Parking would be configured as described below for each parcel, with spaces provided per Table 2.6, Proposed Parking.

The existing street network would be largely maintained. Shasta Street between Main Street and Chestnut Street would be closed to create additional green space, as described below. Additionally, Beech Street would be reconfigured to align with Lincoln Street to the west, while a portion of Cedar Street east of Main Street would become a private street. The buildings would include architectural elements that would take cues from the existing eclectic mix of low-scale buildings, uses, and designs with an industrial feel, such as brick, curved glass curtainwalls, ribbon windows, corrugated metal (Perry's Feed Shed), and other architectural elements as approved by the City's Architectural Permit. In addition, the noncontiguous Parcel F would be developed with a six-story building fronting El Camino Real and Jackson Avenue.

Parcel A

The project would construct a seven-story, 84-foot-tall building. The proposed building would include a corner plaza at Maple Street and El Camino Real. The interior courtyard would include private green space, as well as a pool and other amenities. Retail space would front El Camino Real at Beech Street. The main residential lobby would be on Lathrop Street, close to Elm Street. The parking lot entrance would be available from Beech Street. Figures 2.6-A and B show Parcel A from Lathrop Street and El Camino Real.

AERIAL VIEW LOOKING NORTH TOWARD DOWNTOWN

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.5

LATHROP STREET AT ELM LOOKING WEST TOWARDS CREEK WALK

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL A

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.6-A

EL CAMINO REAL AT MAPLE STREET LOOKING EAST TOWARD CORNER PLAZA AND CREEK WALK

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL A

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.6-B

Table 2.6 Proposed Parking

Parcel	Parking by Land Use	Number of Stalls
Parcel A	Residential	253
	Public	18
	Bike	84
Parcel B	Office	295 (15 motorcycle)
	Public and Child Care	94 (5 motorcycle)
	Carpool	29
	EV Spaces	25
	Bike	15
Parcel C	Office	316 (17 motorcycle)
	Carpool	35
	EV spaces	21
	Bike	18
Parcel D	Office	296 (15 motorcycle)
	Carpool	30
	EV spaces	18
	Bike	15
Parcel E	Office	531 (27 motorcycle)
	Public	19
	Carpool	53
	EV Spaces	34
	Bike	27
Parcel F	Residential	12

Source: Greystar 2018

As shown in Figure 2.7-A the building would integrate different architectural elements and would be surrounded by landscaping elements such as street trees and native grasses along sidewalks. Figures 2.7-B and C shows the building's proposed elevations and entrances.

Parcel B

The project would construct a four-story, 70-foot-high building. The building would have two entrances: one at the corner of El Camino Real and Beech Street, and an entry court at Lathrop Street. The main entertainment space would be located along El Camino Real. The proposed childcare facility and commercial entry would be along Lathrop Street, along with the associated child care outdoor space that would be protected by a wall from the street. The parking lot entrance would be available from Beech Street via the proposed loading ramp. Figures 2.8 A, B and C show Parcel B from Cedar Street and looking northeast at the Cedar/Lathrop intersection, and from El Camino Real.

The building would integrate different architectural elements, and would be surrounded by landscaping elements such as street trees and native grasses along sidewalks. Figures 2.9 A and B show the building's proposed elevations, entrances and materials.

Parcel C

The project would construct a three-story, 48-foot-high building. The primary building entrance would be along Main Street, with a private tenant entrance along Lathrop Street. Parking lot access would be via Cedar Street. Private open space would be available on the ground-floor inner courtyard of the proposed building, while public open space would be available along Lathrop Street. Figure 2.10 shows Parcel C from Lathrop Street.

The building would integrate different architectural elements and would be surrounded by landscaping elements such as street trees and native grasses along sidewalks. Figure 2.11 A and B shows the building's proposed elevations, entrances and materials.

Parcel D

The proposed building includes three stories measuring 48 feet high. The main entry to the building would be along Lathrop Street. The one-story structures at the corner of Elm and Main Streets are outside the project scope and are assumed to remain in their current configuration. A secondary entry plaza would be located along Beech Street. Parking garage entry would be available via Elm Street.

As shown in Figure 2.12 the building would integrate different architectural elements and would be surrounded by landscaping elements such as street trees and native grasses along sidewalks. Figures 2.13-A and B show the building's proposed elevations, materials and entrances.

Parcel E

The project would construct two three-story buildings, each 48 feet high, on both sides of Parcel E. The existing Perry's Feed Shed would be replaced with a similar shed structure that would support the proposed public open space with retail uses. The main entrances for both buildings would be along Main Street, with entry plazas and pedestrian facilities. Parking access would be available at the terminus of Cedar Street.

The new structures and proposed public space are shown in Figure 2.14 and Figure 2.15. The buildings would include large windows to create open-feeling frontings Main Street. The green space would be developed through the closure of a segment of Shasta Street, and expansion of the existing traffic island. Figures 2.16-A through E show proposed views of Parcel E, with commercial uses fronting Main Street near the existing dog park, as well as the buildings elevations, materials and entrances. In addition, a small retail space is proposed at the corner of Main and Beech Streets to support the existing dog park and new office spaces.

1 EL CAMINO REAL ELEVATION
3/32" = 1'-0"

#	ELEVATION KEYNOTES		
01.3	BRICK COLOR 3	7.10	DARK METAL FRAMED TRELLIS
04.5	PAINTED SIGNAGE	7.12	DARK METAL BRISE SOLEIL
05.2	STANDING SEAM METAL PANEL	08.1	VISION GLASS
07.1	DARK METAL PANEL	11.8	BUILDING ADDRESS SIGNAGE 12" MINIMUM
07.3	DARK METAL FRAMED CANOPY		
07.5	DARK METAL FRAMED CURTAINWALL		
07.7	DARK METAL EXTERIOR SHADE STRUCTURE		
07.9	DARK METAL GUARDRAIL		

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL A ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.7-A

1 LATHROP STREET ELEVATION
3/32" = 1'-0"

2 BEECH STREET ELEVATION
3/32" = 1'-0"

#	ELEVATION KEYNOTES				
01.3	BRICK COLOR 3	07.4	DARK METAL FRAMED STOREFRONT	11.8	BUILDING ADDRESS SIGNAGE 12" MINIMUM
02.1	TEXTURED EXPOSED CONCRETE	07.5	DARK METAL FRAMED CURTAINWALL		
02.5	CEMENTITIOUS SIDING	07.7	DARK METAL EXTERIOR SHADE STRUCTURE		
04.5	PAINTED SIGNAGE	07.9	DARK METAL GUARDRAIL		
05.2	STANDING SEAM METAL PANEL	7.12	DARK METAL BRISE SOLEIL		
07.1	DARK METAL PANEL	08.1	VISION GLASS		
07.2	DARK METAL SPANDREL PANEL	08.4	GLASS GUARDRAIL		
07.3	DARK METAL FRAMED CANOPY	10.3	EXTERIOR "WOOD" SHUTTERS		

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Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL A ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.7-B

#	ELEVATION KEYNOTES		
01.3	BRICK COLOR 3	07.5	DARK METAL FRAMED CURTAINWALL
02.1	TEXTURED EXPOSED CONCRETE	07.7	DARK METAL EXTERIOR SHADE STRUCTURE
02.2	CONCRETE SILL	07.9	DARK METAL GUARDRAIL
02.5	CEMENTITIOUS SIDING	7.10	DARK METAL FRAMED TRELLIS
04.5	PAINTED SIGNAGE	08.1	VISION GLASS
07.1	DARK METAL PANEL	08.4	GLASS GUARDRAIL
07.3	DARK METAL FRAMED CANOPY		
07.4	DARK METAL FRAMED STOREFRONT		

1 CREEKSIDE PROMENADE ELEVATION AT EL CAMINO REAL
3/32" = 1'-0"

2 CREEKSIDE PROMENADE ELEVATION
3/32" = 1'-0"

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Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL A ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.7-C

LATHROP STREET AT CEDAR STREET LOOKING NORTH

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL B

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.8-A

LOOKING NORTHEAST ACROSS THE CEDAR/LATHROP INTERSECTION

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL B

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.8-B

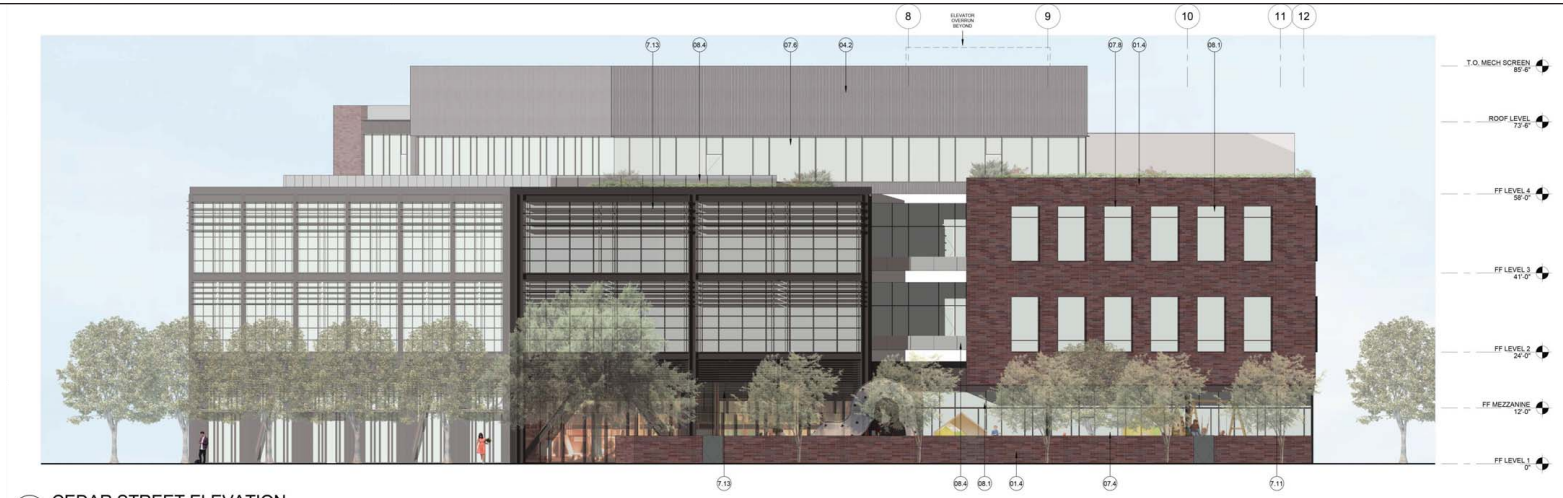
EL CAMINO REAL AT MAPLE STREET LOOKING SOUTH

Source: WRNS STUDIO, 2019.

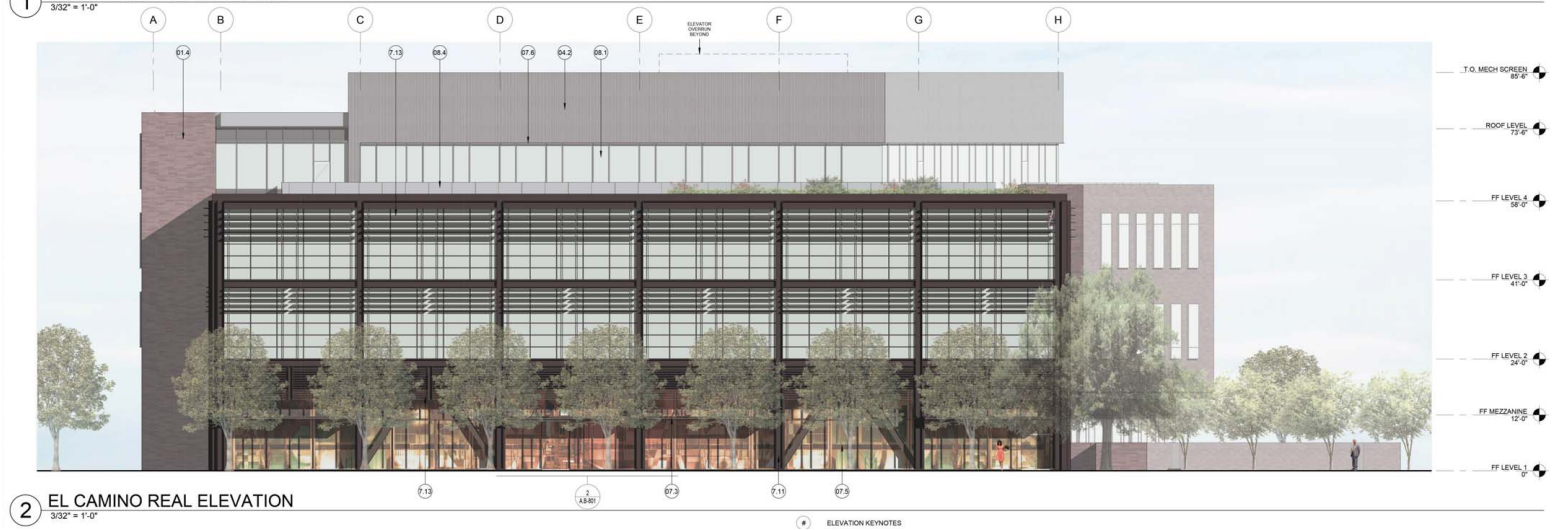
CONCEPTUAL RENDERINGS PARCEL B

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.8-C



1 CEDAR STREET ELEVATION
3/32" = 1'-0"



2 EL CAMINO REAL ELEVATION
3/32" = 1'-0"

ELEVATION KEYNOTES

01.4	BRICK COLOR 4	07.5	DARK METAL FRAMED CURTAINWALL	08.4	GLASS GUARDRAIL
04.1	CORRUGATED METAL ROOFING	07.6	DARK METAL FRAMED RIBBON WINDOWS	08.8	STRUCTURALLY GLAZED CURTAINWALL
04.2	CORRUGATED METAL SIDING	07.8	DARK METAL FRAMED WINDOW	09.2	GLAZED SHADOW BOX
07.1	DARK METAL PANEL	7.11	DARK METAL C CHANNEL	11.4	LOADING DOCK ROLL-UP DOOR
07.2	DARK METAL SPANDREL PANEL	7.12	DARK METAL BRISE SOLEIL		
07.3	DARK METAL FRAMED CANOPY	7.13	DARK METAL LOUVERS		
07.4	DARK METAL FRAMED STOREFRONT	08.1	VISION GLASS		

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL B ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.9-A

#	ELEVATION KEYNOTES				
01.4	BRICK COLOR 4	07.5	DARK METAL FRAMED CURTAINWALL	08.4	GLASS GUARDRAIL
04.1	CORRUGATED METAL ROOFING	07.6	DARK METAL FRAMED RIBBON WINDOWS	08.8	STRUCTURALLY GLAZED CURTAINWALL
04.2	CORRUGATED METAL SIDING	07.8	DARK METAL FRAMED WINDOW	09.2	GLAZED SHADOW BOX
07.1	DARK METAL PANEL	7.11	DARK METAL C CHANNEL	11.4	LOADING DOCK ROLL-UP DOOR
07.2	DARK METAL SPANDREL PANEL	7.12	DARK METAL BRISE SOLEIL		
07.3	DARK METAL FRAMED CANOPY	7.13	DARK METAL LOUVERS		
07.4	DARK METAL FRAMED STOREFRONT	08.1	VISION GLASS		

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL B ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.9-B

LATHROP STREET AT ELM LOOKING WEST TOWARDS CREEK WALK

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL C

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.10

1 BEECH STREET ELEVATION
3/32" = 1'-0"

2 MAIN STREET ELEVATION
3/32" = 1'-0"

#	ELEVATION KEYNOTES				
01.1	BRICK COLOR 1	07.3	DARK METAL FRAMED CANOPY	11.6	ELEVATOR OVERRUN BEYOND
02.1	TEXTURED EXPOSED CONCRETE	07.4	DARK METAL FRAMED STOREFRONT	11.8	BUILDING ADDRESS SIGNAGE 12" MINIMUM
02.2	CONCRETE SILL	07.6	DARK METAL FRAMED RIBBON WINDOWS		
04.2	CORRUGATED METAL SIDING	07.8	DARK METAL FRAMED WINDOW		
04.3	CORRUGATED METAL MECHANICAL SC	08.1	VISION GLASS		
05.2	STANDING SEAM METAL PANEL	08.4	GLASS GUARDRAIL		
07.1	DARK METAL PANEL	09.1	BACKPAINTED GLASS SPANDREL		

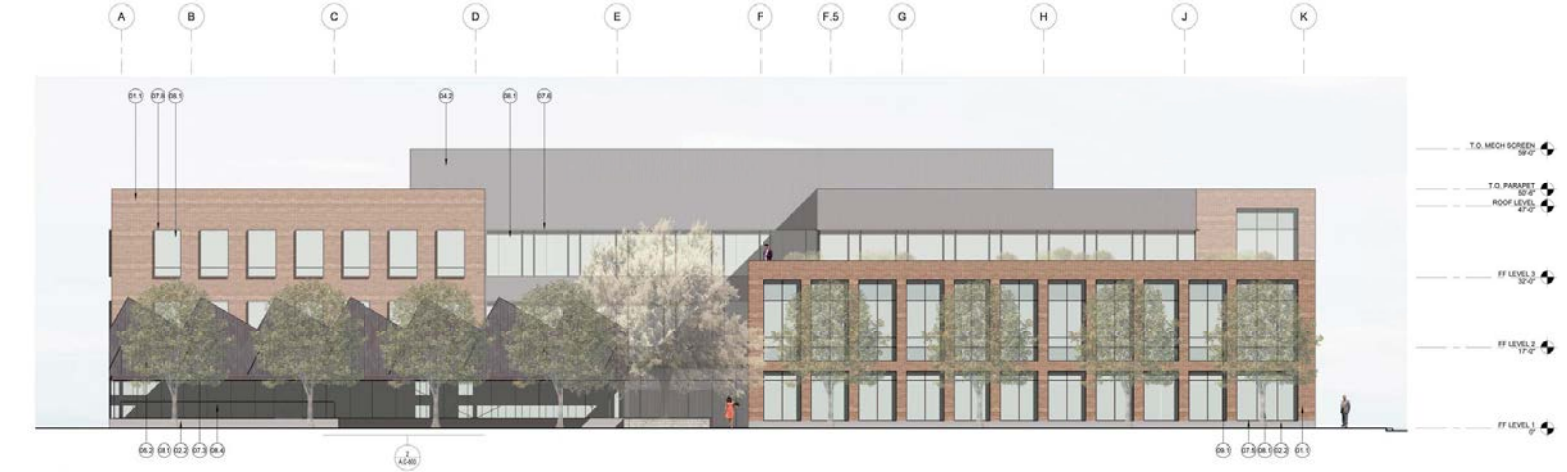
Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL C ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.11-A

1 CEDAR STREET ELEVATION
3/32" = 1'-0"



2 LATHROP STREET ELEVATION
3/32" = 1'-0"

#	ELEVATION KEYNOTES		
01.1	BRICK COLOR 1	07.6	DARK METAL FRAMED RIBBON WINDOWS
02.1	TEXTURED EXPOSED CONCRETE	07.8	DARK METAL FRAMED WINDOW
02.2	CONCRETE SILL	08.4	GLASS GUARDRAIL
04.2	CORRUGATED METAL SIDING	09.1	BACKPAINTED GLASS SPANDREL
05.2	STANDING SEAM METAL PANEL		
07.3	DARK METAL FRAMED CANOPY		
07.5	DARK METAL FRAMED CURTAINWALL		

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Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL C ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.11-B

LATHROP STREET AT ELM LOOKING WEST TOWARDS CREEK WALK

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL D

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.12

1 ELM STREET ELEVATION
3/32" = 1'-0"

2 MAIN STREET ELEVATION
3/32" = 1'-0"

#	ELEVATION KEYNOTES		
01.2	BRICK COLOR 2	07.6	DARK METAL FRAMED RIBBON WINDOWS
02.2	CONCRETE SILL	07.8	DARK METAL FRAMED WINDOW
04.2	CORRUGATED METAL SIDING	7.11	DARK METAL C CHANNEL
07.1	DARK METAL PANEL	08.1	VISION GLASS
07.3	DARK METAL FRAMED CANOPY	09.1	BACKPAINTED GLASS SPANDREL
07.4	DARK METAL FRAMED STOREFRONT	11.7	EXISTING BUILDINGS
07.5	DARK METAL FRAMED CURTAINWALL	11.8	BUILDING ADDRESS SIGNAGE 12" MINIMUM

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL D ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.13-A

1 BEECH ST ELEVATION
3/32" = 1'-0"

2 LATHROP STREET ELEVATION
3/32" = 1'-0"

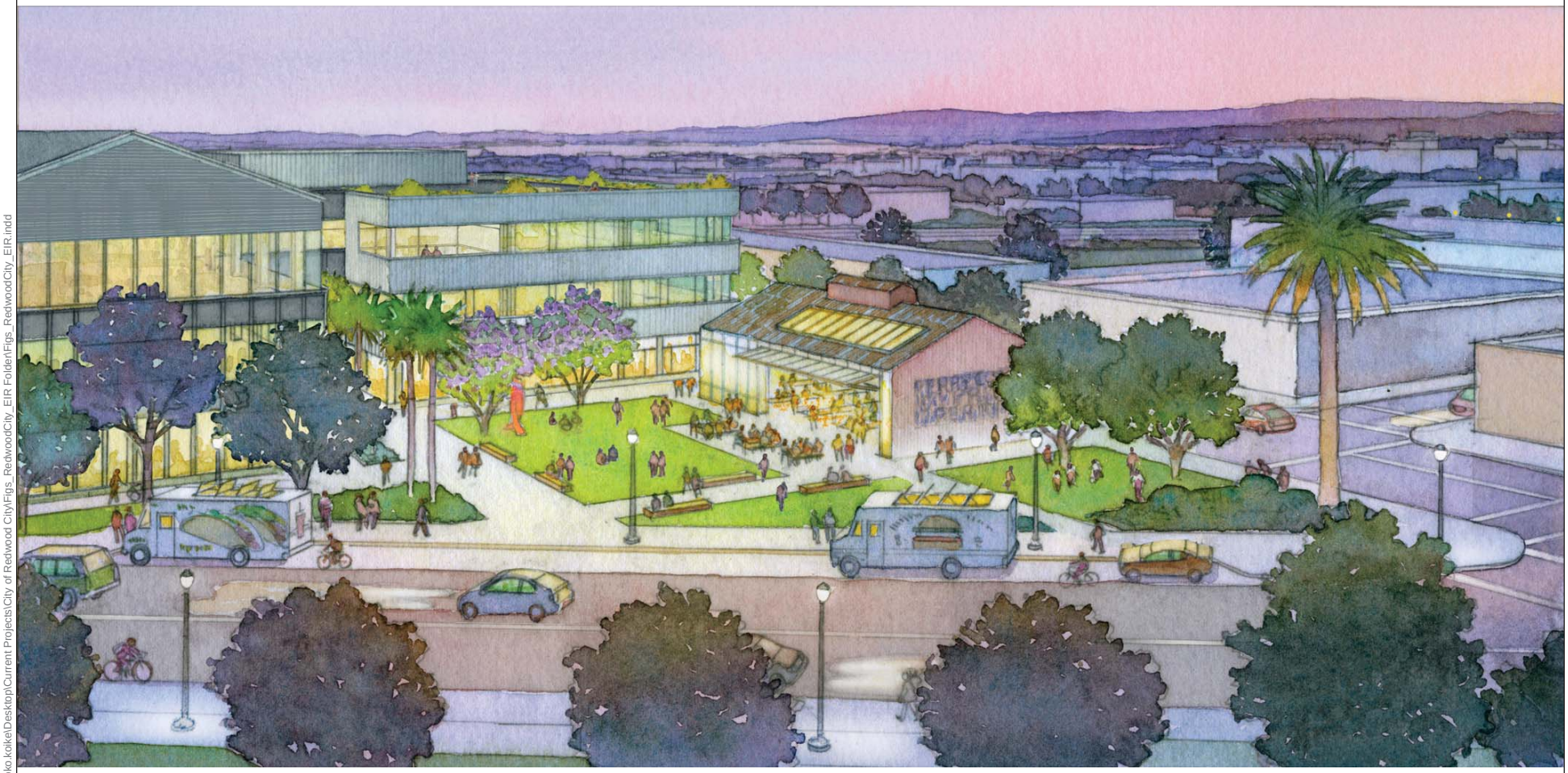
#	ELEVATION KEYNOTES		
01.2	BRICK COLOR 2	07.6	DARK METAL FRAMED RIBBON WINDOWS
02.2	CONCRETE SILL	07.8	DARK METAL FRAMED WINDOW
04.2	CORRUGATED METAL SIDING	7,11	DARK METAL C CHANNEL
07.1	DARK METAL PANEL	08.1	VISION GLASS
07.3	DARK METAL FRAMED CANOPY	09.1	BACKPAINTED GLASS SPANDREL
07.4	DARK METAL FRAMED STOREFRONT	11.7	EXISTING BUILDINGS
07.5	DARK METAL FRAMED CURTAINWALL	11.8	BUILDING ADDRESS SIGNAGE 12" MINIMUM

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL D ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.13-B



PARCEL E & THE SHED LOOKING EAST ACROSS MAIN STREET

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL E

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.14

MAIN STREET DOG PARK LOOKING SOUTH ACROSS BEECH STREET

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL E

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.15

1 MAIN STREET ELEVATION
3/32" = 1'-0"

2 BEECH STREET ELEVATION
3/32" = 1'-0"

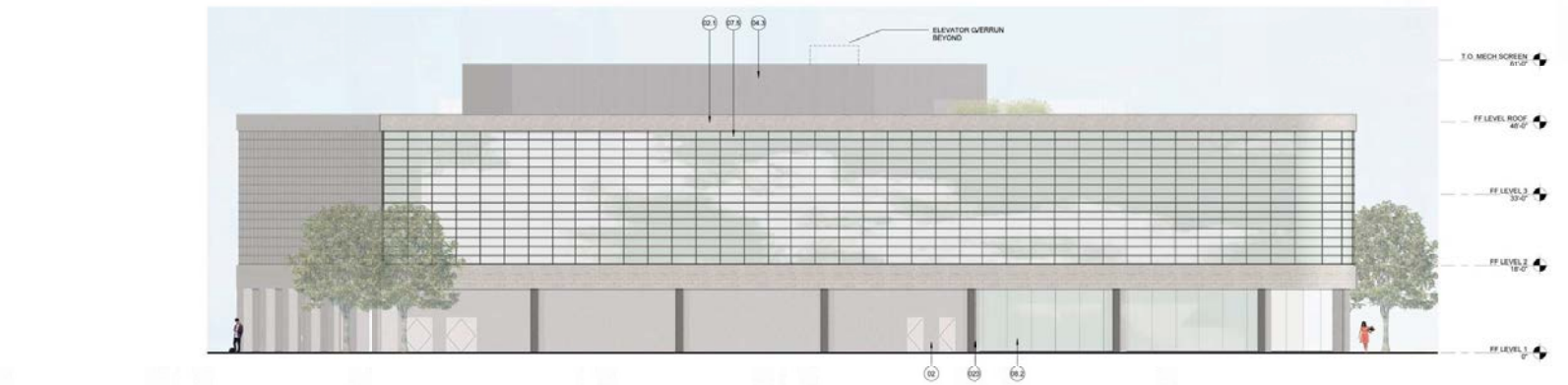
#	ELEVATION KEYNOTES
02.1	TEXTURED EXPOSED CONCRETE
02.3	SHAPED CONCRETE COLUMN
04.3	CORRUGATED METAL MECHANICAL SCREEN
07.5	DARK METAL FRAMED CURTAINWALL
08.2	GLASS STOREFRONT SYSTEM
08.4	GLASS GUARDRAIL
11.6	ELEVATOR OVERRUN BEYOND

Source: WRNS STUDIO, 2019.

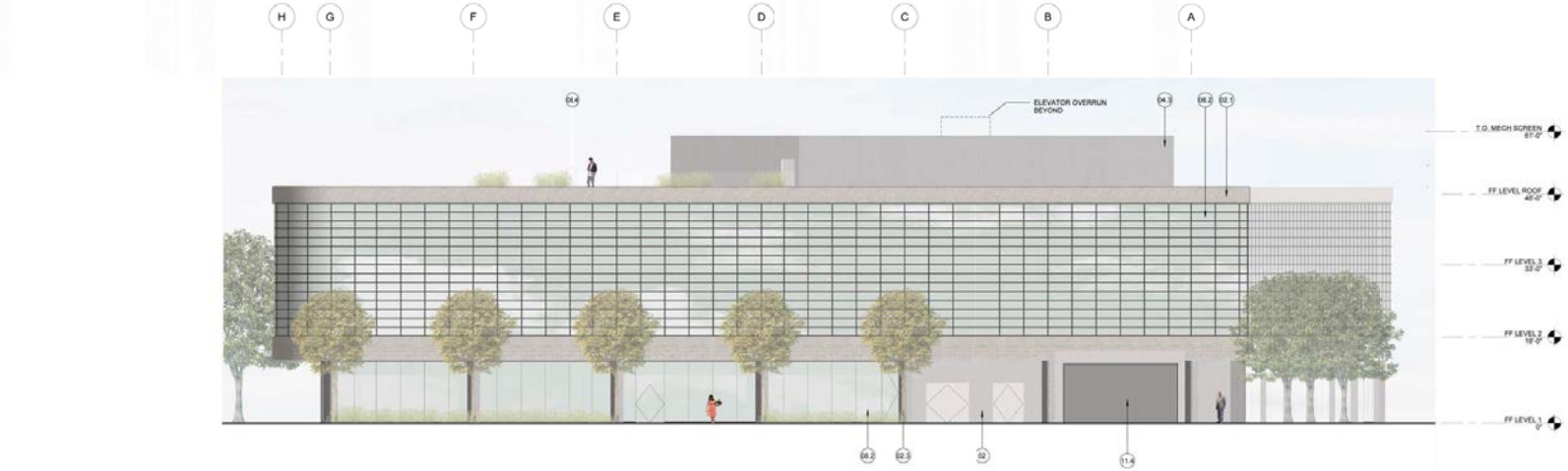
CONCEPTUAL RENDERINGS PARCEL E ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.16-A



1 CALTRAIN ELEVATION
3/32" = 1'-0"



2 CEDAR STREET ELEVATION
3/32" = 1'-0"

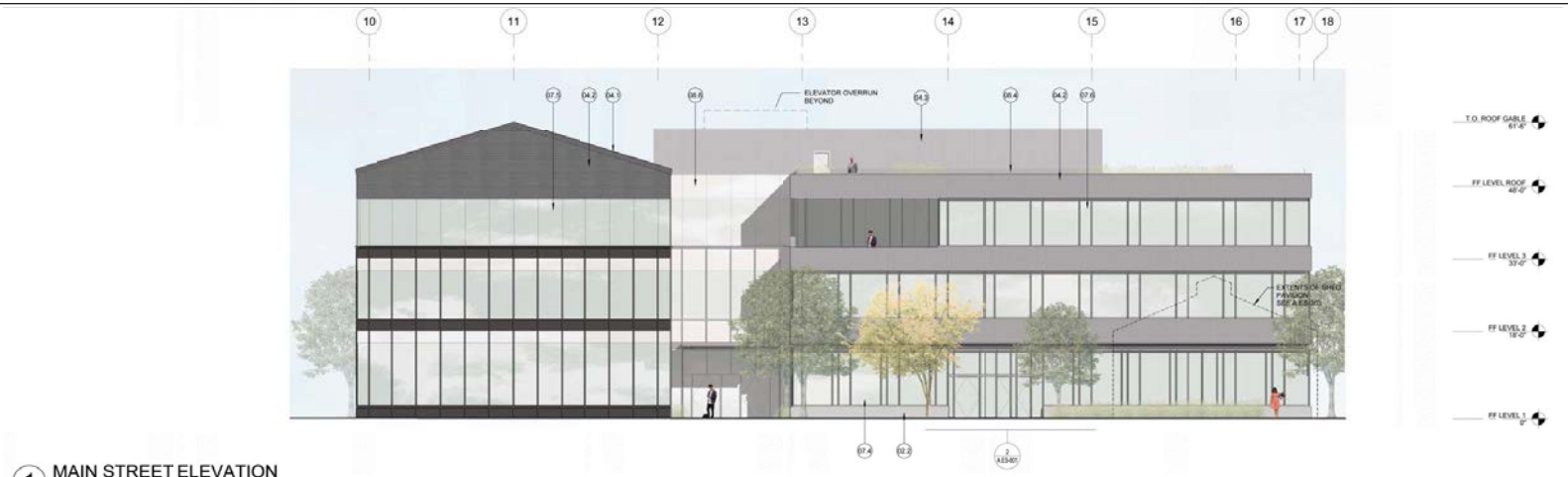
#	ELEVATION KEYNOTES		
02	CONCRETE	08.2	GLASS STOREFRONT SYSTEM
02.1	TEXTURED EXPOSED CONCRETE	08.4	GLASS GUARDRAIL
02.3	SHAPED CONCRETE COLUMN	11.4	LOADING DOCK ROLL-UP DOOR
04.3	CORRUGATED METAL MECHANICAL SCREEN	11.6	ELEVATOR OVERRUN BEYOND
07.5	DARK METAL FRAMED CURTAINWALL		

Source: WRNS STUDIO, 2019.

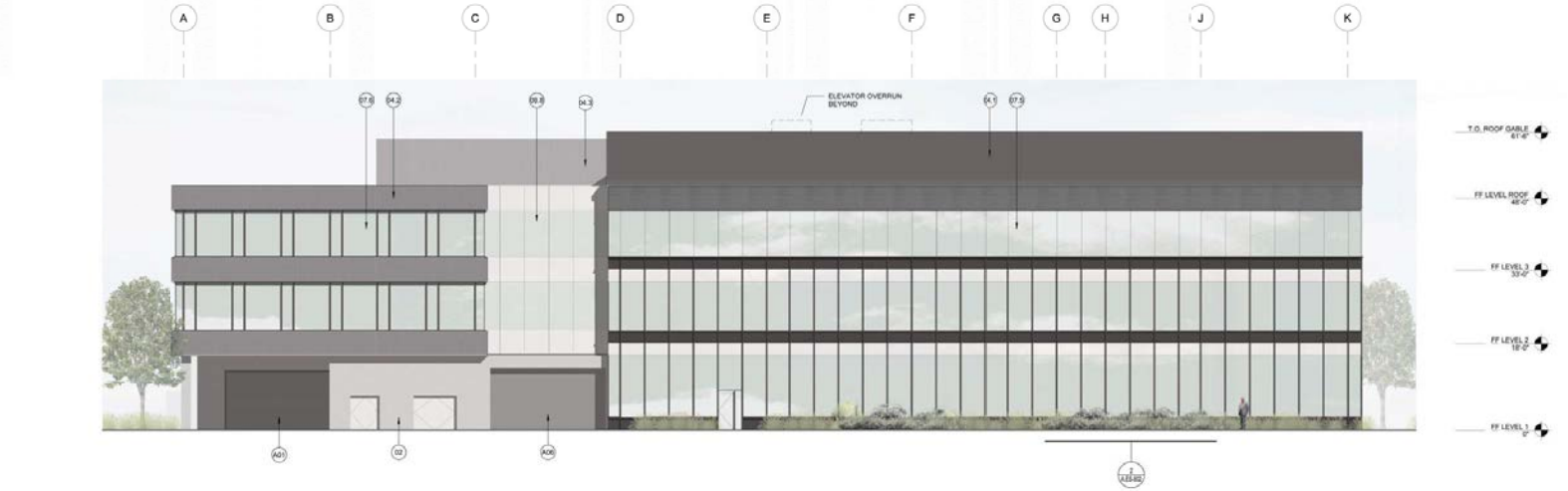
CONCEPTUAL RENDERINGS PARCEL E ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.16-B



1 MAIN STREET ELEVATION
3/32" = 1'-0"



2 CEDAR STREET ELEVATION
3/32" = 1'-0"

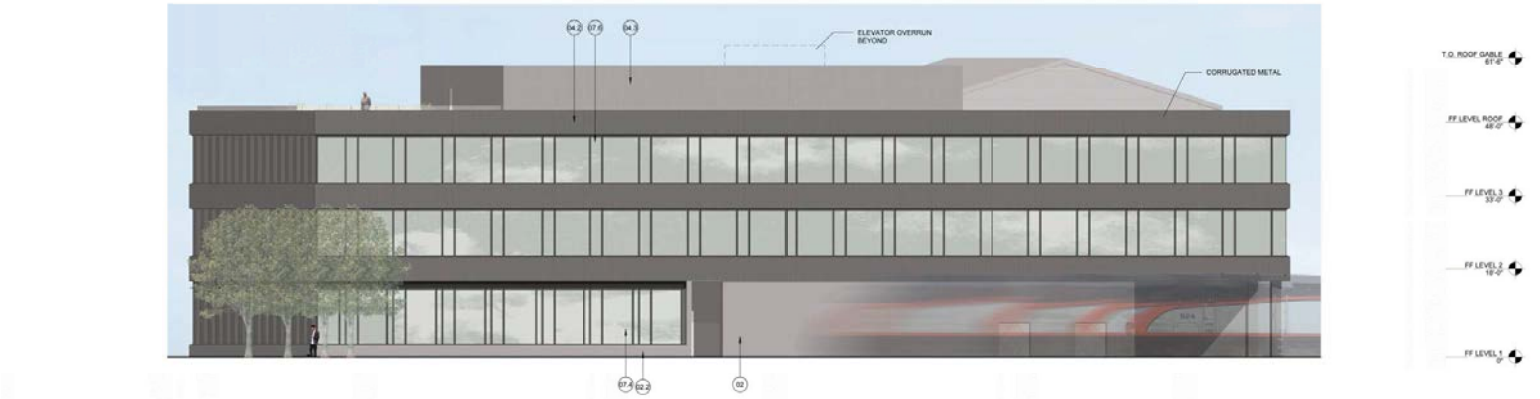
#	ELEVATION KEYNOTES		
02	CONCRETE	07.6	DARK METAL FRAMED RIBBON WINDOWS
02.2	CONCRETE SILL	08.4	GLASS GUARDRAIL
04.1	CORRUGATED METAL ROOFING	08.8	STRUCTURALLY GLAZED CURTAINWALL
04.2	CORRUGATED METAL SIDING	11.6	ELEVATOR OVERRUN BEYOND
04.3	CORRUGATED METAL MECHANICAL SCREEN	A01	GARAGE RAMP DOWN
07.4	DARK METAL FRAMED STOREFRONT	A06	ROLL-UP DOOR
07.5	DARK METAL FRAMED CURTAINWALL		

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL E ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.16-C



1 CALTRAIN ELEVATION
3/32" = 1'-0"

2 CHESTNUT STREET ELEVATION
3/32" = 1'-0"

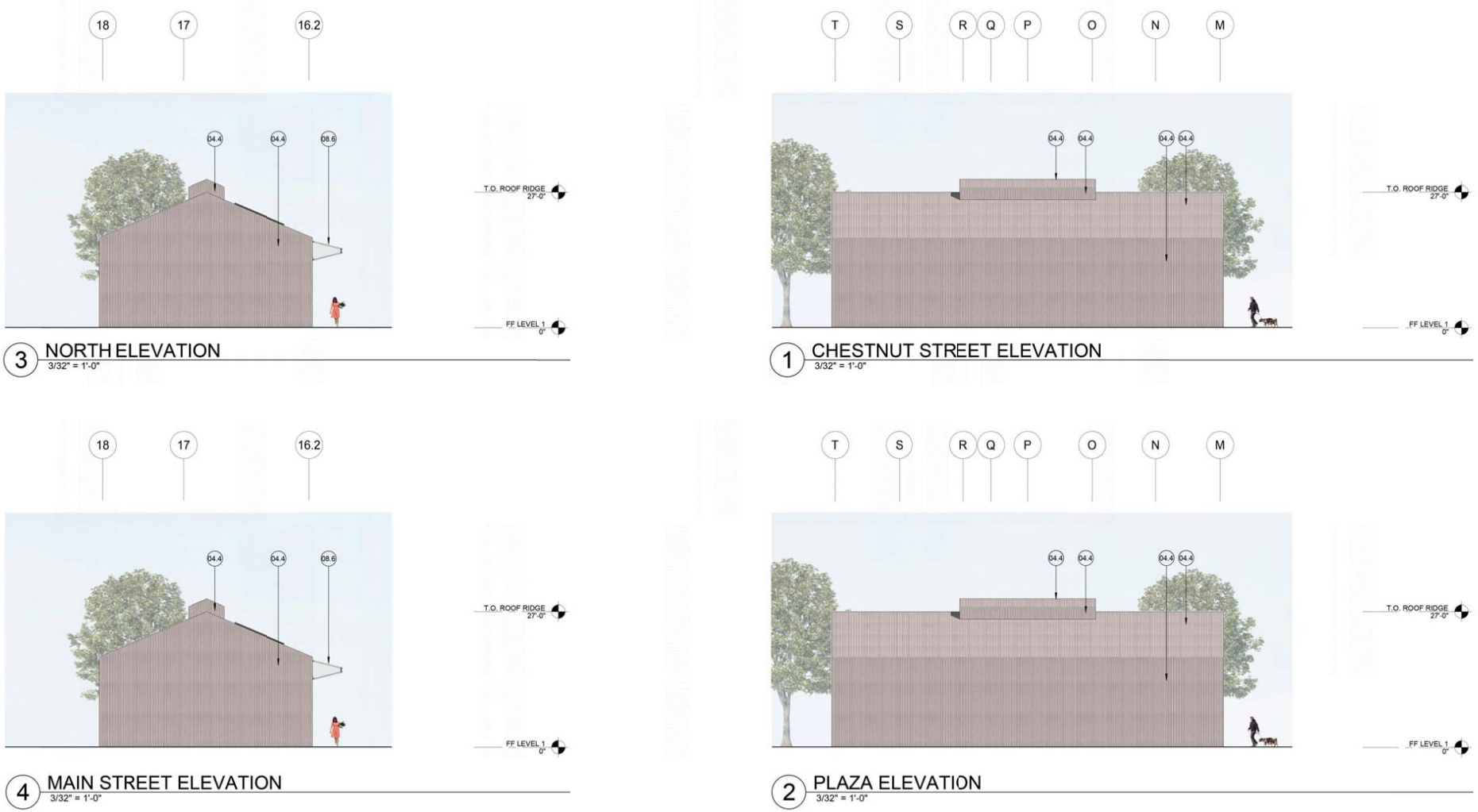
#	ELEVATION KEYNOTES		
02	CONCRETE	07.4	DARK METAL FRAMED STOREFRONT
02.2	CONCRETE SILL	07.5	DARK METAL FRAMED CURTAINWALL
04	CORRUGATED METAL	07.6	DARK METAL FRAMED RIBBON WINDOWS
04.1	CORRUGATED METAL ROOFING	08.4	GLASS GUARDRAIL
04.2	CORRUGATED METAL SIDING	11.6	ELEVATOR OVERRUN BEYOND
04.3	CORRUGATED METAL MECHANICAL SCREEN		

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL E ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.16-D



#	ELEVATION KEYNOTES
04.4	PAINTED CORRUGATED METAL SIDING
04.5	PAINTED SIGNAGE
08.5	GLASS SKYLIGHT
08.6	GLASS AIRCRAFT HANGAR DOOR
08.7	TRANSLUCENT GLASS

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL E ELEVATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.16-E

Parcel F

The project would construct a six-story, 66–foot-high building fronting El Camino Real, as shown in Figures 2.17 A and B. The main entrance to the building would be along El Camino Real Boulevard. A main lobby and a community room would be on the first floor. The parking lot would be accessible via Jackson Avenue, and the bike storage area would be accessible via the podium parking lot. The proposed building would occupy the entirety of the project lot.

2.5 Construction Activities and Schedule

2.5.1 General Construction Activities

Typical construction equipment such as graders, backhoes, excavators, and dozers would be used for site preparation and construction. No pile-driving or blasting are anticipated. Equipment and materials would be staged for construction within established work areas on the project site. The proposed project would include site grading to prepare the site for the proposed development. Approximately 731,000 CY of material are anticipated to be exported from the site during site preparation and project construction .

Heavy vehicles (i.e., haul [tractor-trailer] trucks, machinery) would primarily access the project site via a construction entrance off El Camino Real, unless construction activities preclude such use. Other site access would occur from Main Street. In addition to off-haul trips, vehicular trips would be generated by an estimated maximum of 45 workers per day, per site. Parking for construction workers would be on the project site or at a designated location off-site that is not within the public right-of-way. There would be no multi-day staging of vehicles or equipment on or along existing roadways that are not internal to the project site.

Various improvements would be constructed to improve the site circulation, as shown on Figure 2.18. The following streets would be closed during project construction, as shown in Figure 2.19 – Street Closures during Project Construction:

- Close Beech Street from El Camino Real to Main Street for the duration of construction
- Close Lathrop Street from Elm Street to Cedar Street for the duration of construction
- Close Shasta Street from Main Street to Chestnut Street for the duration of construction
- All internal streets would be closed to pedestrian, bicycle and vehicular traffic.

The following streets would remain open to pedestrian, bicycle, and vehicular traffic:

- Traffic maintained north-south via Main Street and El Camino Real
- Traffic maintained east-west via Maple Street/Elm Street, Cedar Street, and Chestnut Street
- No residential, commercial, or other entrances or parking entrances would be impacted
- All neighboring building and parking access to be maintained.

Parcel E would be constructed on its own, and would be fenced off accordingly. Although construction traffic may need to traverse Main Street, no long-term closure of Main Street is anticipated. Short-term closures of Main Street for activities such as utility installation and sidewalk improvements may be requested. Parcel F is fully contained. Construction on this parcel may require temporary lane closures on Jackson Street or El Camino Real. Lane closure procedures would be outlined in the project's construction traffic management plan developed in accordance with the City's standard conditions of approval, as further described in Section 4.16, Transportation and Traffic.

AERIAL VIEW FROM WEST

VIEW FROM EL CAMINO REAL & JACKSON AVE.

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL F

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.17-A

AERIAL VIEW FROM SOUTH

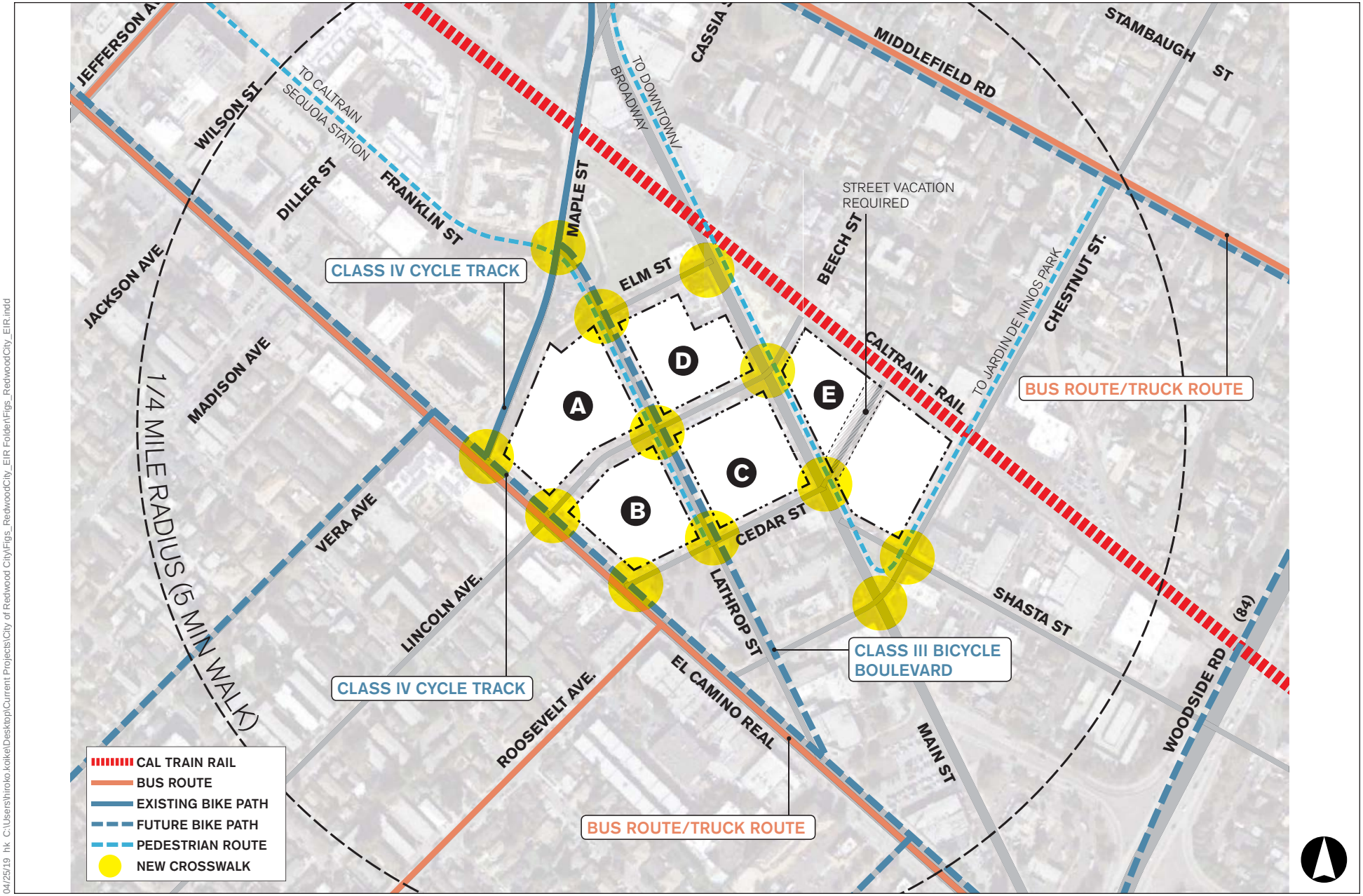
VIEW FROM EL CAMINO REAL

Source: WRNS STUDIO, 2019.

CONCEPTUAL RENDERINGS PARCEL F

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.17-B



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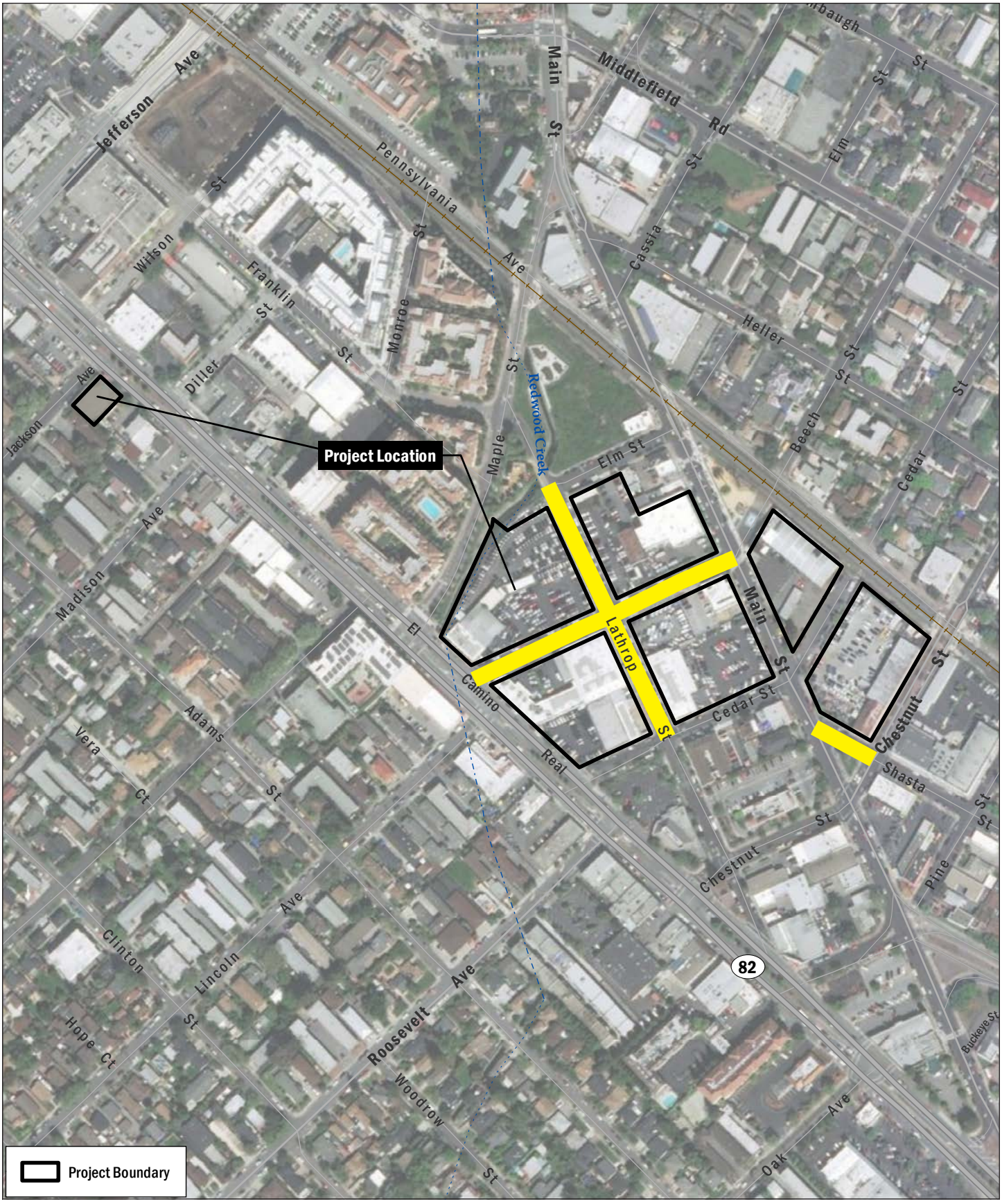
Source: WRNS STUDIO, 2019.

SITE CIRCULATION PLAN

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.18



Data Source: ESRI, 2019.

Closed for the duration of construction

Note: All internal streets would be closed to pedestrian, bicycle and vehicular traffic.

0 200
Feet

STREET CLOSURES DURING PROJECT CONSTRUCTION

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 2.19

2.5.2 Construction Schedule and Phasing

Construction activities would typically occur during the work week, Monday through Friday, between 7:00 a.m. and 8:00 p.m. Some activities, like massive concrete pours and sensitive utility relocation efforts, would require continuous work, beyond the permitted hours. Any work outside of the City of Redwood City construction hours would require special noise permits. The proposed project construction would commence with site work, including tree removal, demolition, excavation, grading, and installation of access roads and utility infrastructure. Project construction would take place simultaneously on parcels A through E. Therefore, multiple crews would be constructing parcels at the same time, and construction activities on each parcel would overlap. The residential construction would follow and overlap with some of the site work. Project construction is expected to last 25 to 27 months, and is anticipated to commence in 2020, with completion in 2022. This project schedule is dependent on market conditions, regulatory approvals, and other factors, and therefore is subject to change.

Project construction for Parcel F would take place over 14 months and would have some overlap with construction on Parcels A-E. Construction on Parcel F would commence in fall of 2020 and would conclude in winter of 2021.

There would likely be multiple destinations for off-haul materials. Construction workers would also be arriving from different directions. Travel routes for workers, soils export, and material import would be determined in consultation with the City's Engineering & Transportation Division.

2.6 Utilities and Service Connections

Civil infrastructure for the project would be served by the City, including storm, sanitary sewer, water, and recycled water services. Dry utilities are provided by Pacific Gas and Electric Company (PG&E [gas and electric]), AT&T, and Comcast and Wave G (telecommunications). All services except recycled water are available at the project site, and would be upsized during construction as necessary to provide system capacity in accordance with applicable standards. A new recycled water main to serve the site will be installed by the project, from the nearest point of the existing recycled water main connection to the limits of the project area.

2.7 Standard Development Requirements

The City of Redwood City has established standard development requirements to address resource protection. The proposed project would comply with these standard development requirements, which are described in greater detail in the relevant topical area of the Initial Study and as attached in Appendix COA.

2.8 Project Approvals

The project is a private development proposal that involves private funds (no city, state, or federal funds). Redwood City is the Lead Agency for the preparation and certification of the Environmental Impact Report (EIR). Where appropriate, responsible, trustee, and other agencies would be consulted during the EIR process. Subsequent development entitlements for the project may require approval of state, federal, and regional responsible and trustee agencies that may rely on this EIR for decisions in their respective jurisdictions. The project would be reviewed and discussed at public hearings before the Historic Resources Advisory Committee, Transportation Advisory Committee, Architectural Advisory Committee, Planning Commission, and City Council. Table 2.7 lists the anticipated discretionary approvals and permits for the project.

Table 2.7 Project Approvals

Jurisdiction	Permits/Approvals
City of Redwood City	• Use Permits • Downtown Planned Community Permit • Vesting Tentative Tract Map • Abandonment of a segment of a public street (Shasta) • Abandonment of a segment of a public street and conversion to a private street (Cedar) • Acquisition of a City-owned parcel (1306 Main Street) • Architectural Permit • Tree Removal Permit • Grading Permit • State Density Bonus concessions and waivers • Affordable Housing Plan
Regional Water Quality Control Board	• Stormwater Pollution Prevention Plan / Construction General Permit • Clean Water Act Section 401 Water Quality Certification
U.S. Army Corps of Engineers	• Section 404 and/or Nationwide Permit
California Fish and Wildlife	• Notification of Lake or Streambed Alteration
Caltrans	• Encroachment Permit for work within El Camino Real right-of-way

2.8.1 State Density Bonus

The project would provide affordable housing on Parcels A and F, thereby qualifying the project for certain requests pursuant to the State Density Bonus Law (SDBL) (Government (Govt.) Code Sections 65915 et. seq.). The SDBL was adopted in 1976 to address California's affordable housing needs. As originally enacted, the SDBL sought to increase the production of affordable housing by requiring local agencies to grant an increase to the maximum allowable residential density for eligible projects, and to support the development of eligible projects at greater residential densities by granting incentives, concessions, waivers, and/or reductions to applicable development regulations. An example of a concession or incentive is a reduction in the number of parking spaces that may be required for a project, or an increase in the allowable building height that applies to the project. The SDBL applies to projects providing five or more residential units, including mixed-use developments. Density bonuses and associated incentives, concessions, waivers, or reductions are intended to offset the financial burden of constructing affordable or specialized units.

The following outlines the general parameters of the SDBL and how it could be applied to the proposed project. To ensure that the potential impacts of the proposed project are sufficiently described and analyzed in this Initial Study, the project description provided herein is based on the maximum development scenario that could be permitted consistent with Redwood City zoning requirements and SDBL.

Residential Development

The Applicant proposes to make 20% of the base allowable residential units in Parcel A available to low-income households, in addition to the affordable units and replacement of existing affordable housing units at Parcel F.

- Density Bonus – The provision of 20% low-income households entitles the Project to a 35% increase in residential units bonus (Govt. Code, Section (§) 65915(f)).
- Concessions/Incentives – Density bonus law grants concessions/incentives for the provision of 20% low-income units (Govt. Code § 65915(d)(2)(B)).
- Development Standard Waiver – Separate from requests for concessions/incentives, SDBL allows a qualifying applicant to request a waiver or reduction of development standards (Govt. Code §65915(e))
- Reduced Parking – The SDBL states that upon the request of the developer, no city shall require a vehicular parking ratio that exceeds the parking ratios set forth in Government Code Section 65915(p)(2) of 0.5 space per bedroom (inclusive of guest parking and handicapped parking).
- Parcel F – Applicant proposes to construct a 100% affordable project on Parcel F at 1304 El Camino Real consisting of 15 extremely low-income, 15 very-low income, 8 low-income, and one manager unit using funds generated from the affordable impact fee of the commercial development, as described below. Pursuant to Zoning Code Section 32.19(I)(5), which implements SDBL, an affordable housing development provided in connection with a nonresidential development project "shall remain eligible for any State Density Bonus, incentives, concessions, waivers, or parking modifications for which the housing development project would otherwise be eligible." (See also Govt. Code § 65915.7(i).

Commercial Development

For the commercial component, consistent with the SDBL section for commercial development (see Govt. Code Section 65915.7) and Zoning Code Section 32.19(I)(3)(b), the Applicant is funding an offsite affordable project at Parcel F. The SDBL and Zoning Code requires that at least 30% of units are available to low-income households, or 15% of units are available to very–low-income households (Govt. Code § 65915.7(h), Zoning Code § 32.19(I)(3)(a)). Because 100% of the units on Parcel F at 1304 El Camino Real would be affordable to very-low-income households, it would qualify for the SBDL for commercial development.

3. Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

- ☒ Aesthetics
- ☐ Agriculture Resources
- ☒ Air Quality
- ☐ Biological Resources
- ☒ Cultural Resources
- ☐ Energy
- ☐ Geology / Soils
- ☒ GHG Emissions
- ☐ Hazards & Hazardous Materials
- ☐ Hydrology / Water Quality
- ☐ Land Use / Planning
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population / Housing
- ☐ Public Services
- ☐ Recreation
- ☒ Transportation
- ☐ Tribal Cultural Resources
- ☐ Utilities
- ☐ Wildfire

ENVIRONMENTAL DETERMINATION

On the basis of this Initial Study, the City of Redwood City finds:

- ☐ 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.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "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 EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date
City of Redwood City

_____

Title

_____

Printed Name

4. Environmental Checklist

The analysis that follows is focused on the proposed development at Parcels A through E. Because the design and supporting application materials for the Parcel F component of the project are not sufficiently developed, analysis of the proposed development on Parcel F is not included in the Initial Study analysis that follows. As a project located in the Downtown Precise Plan (DTPP) area, Parcel F would be subject to the DTPP EIR and will be fully analyzed in the project EIR, based on the development proposal included in the pending application for development at this site and the site specific technical studies that are currently being conducted. Parcel F will be analyzed under CEQA Guidelines Section 15183, which allows a streamlined environmental review process for projects that are consistent with the densities established by existing zoning, community plan or general plan policies for which an EIR was certified. For the purposes of the analysis that follows, the terms “project” and “project site” specifically refer to the proposed development on Parcels A through E only.

4.1 Aesthetics

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	**Aesthetics. Except as provided in Public Resources Code Section 21099, would the project:**				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☒	☐	☐	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

4.1.1 Setting

Project Site Visual Character

The City of Redwood City is located on the western side of the San Francisco Bay, with San Carlos to the west, Menlo Park to the east, and Woodside to the south. Redwood City is characterized as a diverse urban community with a variety of land uses, including waterfront development, small residential neighborhoods, and mixed-use districts. The project site is just outside of the City's Downtown core, totaling 8.30 acres and encompassing five blocks. The site is bounded by El Camino Real, Maple Street, Elm Street, Main Street, Caltrain right-of-way, Chestnut Street, Shasta Street, and Cedar Street. Beech Street, Lathrop Street, and Main Street run through the project site in a north-south direction. The site is also approximately 0.5 mile from the Redwood City Transit Center, and one block from the nearest SamTrans bus stop. The surrounding area is urbanized in a transit-rich area, surrounded by commercial and residential uses. The 8.30-acre project site is currently developed with existing uses, including auto sales, repair, and warehouse space, including one multi-tenant residential building and a former indoor roller rink. The project site's visual character is that of an urbanized area developed with commercial uses.

Scenic Vistas

The City of Redwood General Plan does not designate scenic viewpoints, roadways, or corridors. However, the City's General Plan identifies the City's scenic resources as located in the southern and western portions of Redwood City within the elevated hillside neighborhoods (Redwood City, 2010). These scenic resources are not near the project site, nor are they visible from the project site. Public views of scenic resources, including the San Francisco Bay and its associated baylands, sloughs, and marshes, and the urbanized San Francisco Bay Peninsula, are primarily available from four points within the elevated hillsides, including the Easter Cross, Easter Bowl, Cañada College, and the Edgewood County Park, approximately 4 miles east of the project site.

Scenic Highways

No state-designated scenic highways traverse Redwood City. Highway I-280 is the closest state scenic highway and is approximately 3 miles south of the project site (Caltrans, 2016).

Light and Glare

The project site is currently developed with several uses that include nighttime lighting. Land uses on the project site generate nighttime lighting from security lights on buildings and in parking lots. The current car dealership includes nighttime lighting throughout the site. Glare is typical in the project area from existing buildings, as well as windshields of parked cars.

4.1.2 Discussion

Public Resources Code Section 21099(d), effective January 1, 2014, provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." Accordingly, aesthetics impacts are no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all of the following three criteria:

(1) The project is in a transit priority area. [1]

(2) The project is on an infill site.[2]

(3) The project is residential, mixed-use residential, or an employment center.

The project meets each of the above three criteria because each (1) is located within one-half mile of a rail transit station; (2) is located on an infill site that has been previously developed with commercial uses and is surrounded by areas of either recently completed or planned urban development; and (3) would be a mixed-use residential project. Therefore, this initial study and the EIR are not required to consider aesthetics in determining the significance of project impacts under the California Environmental Quality Act (CEQA). Regardless, an analysis of visual impacts will be provided in the EIR for informational purposes and, as discussed below, to confirm the project is consistent with the applicable City development standards pertaining to scenic quality.

The City recognizes that the public and decision makers nonetheless may be interested in information pertaining to the aesthetic effects of a proposed project and may desire that such information be provided as part of the environmental review process. In addition, Public Resources Code Section 21099(d)(2) states that a lead agency maintains the authority to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers, and that aesthetics impacts do not include impacts on historical or cultural resources (e.g., historic architectural resources). Therefore, the City considers aesthetics for design review and to evaluate effects on historic and cultural resources, and aesthetic effects would be included in the project-specific EIR are outlined below.

a) Have a substantial adverse effect on a scenic vista?

No Impact. As outlined above, there are no scenic vistas in the project vicinity. The areas surrounding the project site are developed with two- to three story buildings, with the seven- to eight-story buildings in the nearby Downtown core. Due to the distance from any scenic resources and the nature of development in the

[1] Public Resources Code Section 21099(a)(7) defines a "transit priority area" as an area within one-half mile of an existing or planned major transit stop. A "major transit stop" is defined in Public Resources Code Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[2] Public Resources Code Section 21099(a)(4) defines an "infill site" as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75% of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses. "Qualified urban uses" are defined in Public Resources Code Section 21072 as any residential, commercial, public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses.

project area, the project would not disrupt views of scenic resources in the City. Therefore, the project would have **no impact** on scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. As described in the Setting section above, the project site is not located near any state-designated scenic highways and would not be visible from any state-designated scenic highways. Therefore, the project would not substantially damage scenic resources within a state scenic highway. The project would have **no impact.**

c) In non-urbanized area, 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?

Potentially Significant Impact. As discussed in Section 2, Project Description, the project would include demolition of all buildings on the five project parcels; development of 252 residential units on Parcel A; and approximately 585,000 square feet of office uses, retail uses, and childcare facility uses in an urbanized area. The proposed buildings would be between three and seven stories each. Additionally, approximately 150,000 square feet of public and private open space would be developed.

To determine if the project impact would result in a potentially significant impact, a detailed analysis of the proposed project's potential to conflict with applicable zoning and regulations governing scenic quality would be analyzed fully in the EIR. The analysis provided in the forthcoming EIR will provide substantiated conclusions regarding the significance of the project impact, and if necessary recommend mitigation measures to address any potential significant impact.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Potentially Significant Impact. The project site is located in an urbanized environment and is surrounded by existing sources of light and glare. These sources of light and glare include streetlights, exterior lighting on commercial and residential buildings, reflective building material, and vehicular headlights. The proposed project would demolish the existing structures and develop multiple three- to seven-story buildings. Although the proposed project would be consistent with the existing surrounding land uses, development of the proposed project would result in new sources of light and glare that could adversely affect daytime or nighttime views in the area. To determine if the project would result in a potentially significant impact, additional analysis will be provided in the forthcoming EIR addressing the impacts of light and glare. The analysis provided in the forthcoming EIR will provide substantiated conclusions regarding the significance of the project impact, and if necessary recommend mitigation measures to address any potential significant impact.

References:

California Department of Transportation, 2016. San Mateo County. Officially Designated Scenic Highway Map. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed April 17, 2019.

City of Redwood City, 2010. Redwood City New General Plan, Section 4.1 Aesthetics. Available: https://www.redwoodcity.org/home/showdocument?id=5007. Accessed April 17, 2019.

4.2 Agricultural and Forestry Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forestry Resources. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

4.2.1 Setting

According to the San Mateo County Important Farmland map, published by the California Department of Conservation's Division of Land Resource Protection, the project site and adjacent lands are designated as Urban and Built-Up Land. This is land that is used for residential, industrial, commercial, institutional, and public utility structures, and for other developed purposes (California Department of Conservation, 2012). The California Department of Conservation does not consider Urban and Built-Up Land to be Important Farmland.

Under the California Land Conservation Act of 1965, also known as the Williamson Act, local governments can enter into contracts with private property owners to protect land (within agricultural preserves) for agricultural and open space purposes. No parcels within or adjacent to the project site are under Williamson Act contracts (San Mateo County, 2014).

4.2.2 Discussion

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The discussion below applies to all significance thresholds (a), (b), (c) and (d) as outlined above.

The California Department of Conservation categorizes the project site and the surrounding areas as Urban and Built-up Land; therefore, these areas are not Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), and are not subject to any Williamson Act contracts (DOC, 2012). The project site and surrounding area are not zoned for agricultural uses, and are not zoned for forestland, timberland, or Timberland Production Zone.

The project site is currently zoned MUC-ECR (Mixed Use Corridor – El Camino Real) and MULW (Mixed-Use – Live/Work). The project would not convert any farmland to non-agricultural use; convert any forest land to non-forest use; or conflict with existing agricultural or timberland zoning. Therefore, the project would have **no impact** on agricultural and forest resources.

References:

California Department of Conservation. 2012. San Mateo County Williamson Act FY 2006/2007. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/SanMateo_06_07_WA.pdf. Accessed March 2019.

San Mateo County. 2014. San Mateo County Important Farmland 2014. Available: https://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/smt14.pdf. Accessed March 2019.

4.3 Air Quality

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

4.3.1 Setting

California is divided geographically into air basins for the purpose of managing the air resources of the state on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The state is divided into 15 air basins. Redwood City is in the San Francisco Bay Area Air Basin.

Air quality is defined by the concentration of pollutants in relation to their impact on human health. 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 in the local air basin are influenced by such natural factors as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

The Bay Area Air Quality Management District (BAAQMD) monitors air quality in Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties, and portions of Solano and Sonoma Counties in the San Francisco Bay Area Air Basin (SFBAAB). Local climatological effects, including wind speed and direction, temperature, inversion layers, and precipitation and fog, can exacerbate air quality problems in the SFBAAB. The climate of the SFBAAB is characterized by warm, dry summers and mild winters.

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 (ARB) 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 and environment health-based criteria, they are commonly referred to as "criteria air pollutants."

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

4.3.2 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

Potentially Significant Impact. BAAQMD prepares plans to attain state and national ambient air quality standards in the SFBAAB. BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate on April 19, 2017 (ARB, 2017). This plan provides a regional strategy to attain state and federal air quality standards by reducing ozone, PM, and toxic air contaminants.

Air quality plans identify 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.

Consistency with the air quality plan is also 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 national ambient air quality standards. 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 BAAQMD's ability to reach attainment (ARB, 2017).

Project construction and operation would emit air pollutants that have the potential to conflict with or obstruct implementation of an applicable air quality plan. Therefore, the impact is considered **potentially significant**, and the proposed project's potential to conflict with applicable air quality plans would be further analyzed in the EIR.

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?

Potentially Significant Impact. 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, and this regional impact is cumulative, rather than attributable to any one source. Per CEQA Guidelines Section 15064(h)(4), the 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. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The proposed project's construction and operational emissions could exceed the thresholds of significance. Therefore, emissions associated with the proposed project could be cumulatively considerable and **potentially significant**. This impact would be fully addressed in the EIR.

c) Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. Sensitive receptors refer to those individuals of the population most susceptible to poor air quality: children, the elderly, and those with pre-existing serious health problems affected by air quality. Examples of receptors include residences, schools and school yards, parks and playgrounds, daycare centers, nursing homes, and medical facilities. The nearest sensitive receptors to the project site are the immediately adjacent residential development and Main Street Dog Agility Park

Construction and operational emissions for the proposed project could expose sensitive receptors to substantial pollutant concentrations. Therefore, the potential to cause a substantial adverse effect to sensitive receptors is considered a **potentially significant impact**, and would be further analyzed in the EIR.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public, and causing citizens to submit complaints to local governments and regulatory agencies. Typical facilities that generate odors include wastewater treatment facilities, sanitary landfills, composting facilities, petroleum refineries, chemical manufacturing plants, and food processing facilities.

The project would develop residential, commercial office, and retail uses. Construction and operation of the proposed residential, retail, and office land uses would not generate substantial odors that would affect a substantial number of people. During operation, retail uses such as restaurants and nearby residences could generate odors from cooking. Odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people. 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.

During project-related construction activities on the project site, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Therefore, project impacts from odors would be **less than significant**.

References:

California Air Resources Board (ARB), 2017. California Environmental Quality Act Air Quality Guidelines. Available online at http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

4.4 Biological Resources

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

4.4.1 Setting

The project site is located in an urbanized area of Redwood City and is almost entirely covered by impervious surfaces. The site is surrounded by residential housing, commercial buildings, and roads any existing corridors to open space. The project site is approximately 2.0 miles north of the Bair Island Ecological Reserve, a 2,600-acre open-space area in the Don Edwards San Francisco Bay National Wildlife Refuge.

The project site is composed of five quadrangular parcels that are situated between El Camino Real and Main Street, with one parcel bounded between Pennsylvania Street and Chestnut Street, east of Main Street. An open-air, channelized branch of Redwood Creek is adjacent to the northwest side of Parcel A; is culverted under Lathrop Street; then opens again north of Parcel D at the Elm Street and Lathrop Street intersection. The main channel of Redwood Creek is approximately 0.40 mile northwest from the site and connects to the San Francisco Bay approximately 3.0 miles northeast of the site.

Vegetation at the site and the surrounding area includes ornamental shrubs and landscape trees, such as Canary Island date palm, camphor, sweetgum, callery pear, and Chinese pistache. An undeveloped vacant lot composed of ruderal grassland/weedlot borders the northern boundary of the project site on Elm Street. Although the undeveloped vacant lot is not included in the project site development, it does provide habitat for numerous common wildlife species that thrive in urban areas, including western scrub jay (*Aphelocoma californica*), white-crowned sparrow (*Zonotrichia leucophrys*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida*

macroura), house finch (*carpodacus mexicanus*), red-tailed hawk (*Buteo jamaicensis*), common raccoon (*Procyon lotor*), and Botta's pocket gopher (*Thomomys bottae*). In addition, a variety of birds and certain bat species could nest/roost in the numerous trees at the project site, or in the buildings and structures on the property.

A review of the California Natural Diversity Database (CNDDB) was conducted to identify special-status plant and wildlife species and their habitats that have previously been recorded in the 2-mile project vicinity (CNDDB 2019). The CNDDB search identified one reptile species (San Francisco garter snake), one mammal species (salt marsh harvest mouse), five bird species (Western snowy plover, Yellow Rail, Alameda song sparrow, Ridgeway's rail, California least tern*)*, and two plant species (San Mateo thorn-mint and Crystal Springs fountain thistle). With the exception of nesting areas for birds, habitats supporting special-status plant and wildlife species are not present at the site.

A Preliminary Arborist Report was prepared for the project site by Hort Sciences. Trees were assessed on October 12, 2017. All trees measuring 4 inches in diameter or greater were included in the survey, as required by the City of Redwood City. The survey identified a total of 65 trees that were assessed, representing 16 species. Overall, trees were in fair condition, with 50 trees or 77% of trees assessed; 15 trees were in good condition (23%). Many of the trees assessed were located along a street frontage or behind the sidewalk adjacent to the street (Hort Sciences, 2017). The most prevalent species assessed was callery pear, with 30 trees, or 46% of the tree population.

4.4.2 Discussion

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation.

Plants. Two special-status plant species were identified in the CNDDB search: San Mateo thorn-mint and Crystal Springs fountain thistle. Both are federal- and state-endangered species, with a rare plant ranking of 1B.1 based on the review of the California Native Plant Society (CNPS) On-Line Inventory. These species occur in specific habitat areas such as serpentine soils in the Crystal Springs Reservoir and Edgewood Park and Natural Preserve. The nearest occurrences for these species are approximately 8.25 miles northwest and 3.85 miles west of the project site. Based on the existing conditions of the project site and surrounding area, there is no potential for special-status plant species to occur in the project site due to the absence of habitat. Therefore, there would be **no impact** on special-status plants in relation to construction or operation of the proposed project.

Reptiles and Amphibians. There are five occurrences of San Francisco garter snake, a special-status reptile species, identified within 2 miles of the project site in the CNDDB search. The San Francisco garter snake, a federal and state endangered species, occurs in grassland and open coastal scrub habitat in proximity to aquatic features such as marshes, wetlands, and riparian corridors on the Bay Area Peninsula.

There were five CNDDB occurrences within 2 miles of the project site, with unspecified locations and habitat descriptions of grassland, coastal scrub, riparian, pond, and wetland. Despite the proximity of these occurrences, the lack of suitable habitat for this species in the project site and the lack of habitat connectivity to other suitable areas render it unlikely that this species would be present on the project site. San Francisco garter snake is strongly associated with aquatic and wetland features and is also strongly associated with Sierran tree frog and California red-legged frog as favored prey items, with no CNDDB occurrence records of California red-legged frog within 2 miles of the project site. Therefore, there would be **no impact** on special-status reptiles and amphibians in relation to the construction or operation of the proposed project.

Birds. Five special-status bird species were identified in the CNDDB search. All five of these special-status species are known to occur in specific habitat types that are not present in the project site or nearby vicinity. Therefore, there would be **no impact** in relation to the construction or operation of the proposed project.

- Western snowy plover is a federal- and state-threatened species of shorebird found in the tidal marshes and coastal shorelines with beaches. This species has no potential to occur within the project site.
- Yellow rail is a California Species of Special Concern, currently confined to the salt marshes of the San Francisco South Bay. This species is considered to have no potential to occur in the project site.
- Alameda song sparrow is a California Species of Special Concern whose habitat consists of coastal salt marsh. This species has no potential to occur in the project site.
- Ridgeway's rail is a federal- and state-endangered species of secretive marsh bird found in the coastal tidal marshes of the San Francisco Bay and greater area. This species has no potential to occur in the project site.
- California least tern is a federal- and state-threated species with seasonal occurrence in the San Francisco Bay Area during the breeding season. This species is primarily found on coastal beaches and along open shorelines with tidal influence. This species has no potential to occur in the project site.

Nesting Birds. The proposed project would include tree removal, and nesting birds may be present in the existing trees and foliage in and surrounding the project site. Therefore, if tree removal were to occur during the nesting season (February 1 through August 31), nesting birds could be disturbed. Nesting birds, their nests, and their eggs are fully protected by California Fish and Game Code (CDFG) Sections 3503 and 3503.5, and the federal Migratory Bird Treaty Act. The lack of natural nesting habitats in urban areas tends to result in resident and migratory birds nesting in ornamental and/or street trees and on structures. Project development would be subject to the Migratory Bird Treaty Act, which does include habitat supporting migratory birds such as on-site or street trees potentially used by nesting birds. Any disturbance to nesting birds during nesting season would be considered a potentially significant impact, and Mitigation Measure BIO-1 would be required. With implementation of MM BIO-1 project impacts would be **less than significant.**

Mitigation Measure BIO-1: Nesting Birds Surveys

If construction activities are scheduled during the nesting season, a qualified biologist shall perform pre-construction surveys for nesting birds no more than 14 days prior to the initiation of demolition/construction activities during the early season (January through April), and no more than 30 days prior to the initiation of these activities during the late season (May through August).

A qualified biologist shall inspect all tress in and immediately adjacent to the impact areas for nests. If an active nest is found in proximity to the project area with potential to be disturbed by these activities, the biologist, in consultation with the California Department of Fish and Wildlife (CDFW), shall determine the extent of the construction-free buffer zone to be established around the nest.

The buffer zones shall remain in place until the young have fledged and are foraging independently and able to disperse from the area of their own ability. A qualified biologist shall monitor the active nests until it is determined the nest is no longer active, at which time construction activities may commence within the buffer area.

Mammals. The CNDDB search identified one special-status mammal species: the salt marsh harvest mouse. The salt marsh harvest mouse is a listed federal- and state-endangered species that only occurs in the brackish tidal and salt marshes of the San Francisco Bay Area and has a strong habitat association with tidal wetlands and stands of pickleweed. This species has no potential to occur in the project site because tidal wetlands are absent. Therefore, the project would have **no impact** on mammals.

Bats. No special-status bat species were identified in the CNDDB project vicinity search. Bat species without special status, but with some potential to use the project site, include the big brown bat, Brazilian free-tail bat and Yuma myotis. These bat species are widely distributed throughout California and occur in a variety of habitats, from man-made structures such as mines, bridges, and buildings, to natural habitats such as caves,

rock outcrops, and trees. Tree-roosting bats would roost in tree snags or live trees supporting cavities, crevices, or loose bark. Although potential bat roosting areas (trees and buildings) are present at the project site, the site does not contain preferred foraging areas near riparian corridors or Redwood Creek. Additionally, the surrounding residential/developed areas diminish the quality of ideal habitat for these bat species due to their sensitivity to disturbance. Therefore, due to the limited quantity and quality of habitat being affected by the proposed project, the potential for loss of bat habitat or disturbance to roosting sites due to the construction and operation of the proposed project would have a low potential to occur.

Bats are protected by CDFG Code 4150, which states: "all mammals occurring naturally in California which are not game mammals, fully protected mammals, or fur-bearing mammals, are non-game mammals. Non-game mammals or parts thereof may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the Commission." Bats are primarily protected through environmental review under CEQA. The project development would result in little change to the existing condition of the surfaces on the site, and therefore, would have a low potential to impact bat species.

Nonetheless, if bats are present at the project site, project impacts would be potentially significant, and Mitigation Measure BIO-2 would be required. With implementation of MM BIO-2, project impacts would be **less than significant**.

Mitigation Measure BIO-2: Roosting Bats:

(1) Preconstruction Surveys. A qualified biologist shall conduct a preconstruction survey during seasonal periods of bat activity (mid-February through mid-October) to determine suitability of structure(s) or trees as bat roost habitat.

(2) Protective Buffer Zone(s). If active bat roosts are found on-site, a suitable buffer from construction shall be established per the biologist. The biologist shall determine the species of bats present and the type of roost.

(3) Mitigation and Exclusion. If the bats are identified as common species, and the roost is not being used as a maternity roost or hibernation site, the bats may be evicted using methods developed by a qualified biologist. If special-status bat species are found to be present, or if the roost is determined to be a maternity roost or hibernation site for any species, then the qualified biologist shall develop a bat mitigation and exclusion plan to compensate for lost roost. The site shall not be disturbed until CDFW approves the mitigation plan.

Invertebrate and Fish Species. The CNDDB search identified no special-status invertebrates or fish species in the project vicinity. Suitable habitat for these species is not present in the project site. Particularly, the channelized concrete side drainage of Redwood Creek adjacent to the project site lacks the essential habitat features for special-status salmonid species and green sturgeon (i.e., riffles, pools, cobble and gravel substrate, and tidal influence), with permanent barriers to fish passage along the drainage, such as culverts and storm grates. In addition, special-status invertebrate species of the San Francisco Bay Area are typically associated with specific habitat types or host plants to complete their lifecycle. These habitats do not occur in the project site. As a result, these species would not be expected to occur at the project site, and there would be **no impact** on special-status fish or invertebrates in relation to construction or operation of the proposed project.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The discussion below applies to significance thresholds (b) and (c) as outlined above.

Proposed pedestrian and bikeway facilities construction over Redwood Creek may be subject to the issuance of permits in compliance with the Federal Clean Water Act Section 401 and Section 404, and the California Department of Fish and Game Code Section 1600 et seq. If applicable, issuance of these permits would include any necessary conditions of approval to address potential adverse hydrology and water quality impacts during construction activity. However, the project site does not contain any riparian habitats or other sensitive natural communities (NMFS 2016). Additionally, the project site does not contain any state or federally protected wetlands. Therefore, the project would have **no impact**.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact. Habitat corridors facilitate the movement between wildlife populations in more remote areas, and populations in larger habitat areas. Wildlife movements include seasonal migration (unidirectional), inter-population movement, and short or home-range travel pathways (i.e., movement corridors in an animal's territory for mating or foraging). These wildlife corridors are important for providing connection between outlying populations, and for daily home-range activities, such as foraging, hunting, or escape from predators.

The Don Edwards National Wildlife Refuge on Bair Island and the San Francisco Bay are within proximity to the project site and provide the nearest locations for suitable habitat of native resident or migratory wildlife species, such as migratory birds. The ability of the project site to function as a significant wildlife corridor is limited due to the extensive urbanization within the project boundary and surrounding area. Wildlife adapted to urban environments that are likely to use migratory pathways in the project site includes raccoon, striped skunk, opossum, and potentially gray fox.

Overall, project development would result in little change to the existing condition of the surfaces on the site. Additionally, the project Applicant would be subject to, and would comply with, federal and state migratory bird regulations and roosting bat regulations; therefore, the project development would not interfere with the movement of native resident or wildlife species, or with established native resident or migratory wildlife corridors. This impact would be **less than significant**.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. According to the project-specific Arborist Report (Appendix BIO), there is a total of 65 trees in the project area, representing 16 species. Overall, trees were in fair condition with 50 trees or 77% of trees assessed; 15 trees were in good condition (23%) (Hort 2017). Many of the trees assessed were located along a street frontage or behind the sidewalk adjacent to the street. None of the evaluated trees were considered highly suitable for preservation, based on the trees' health, structural stability, and longevity at the site. Project development would involve the removal of 32 exotic street trees along the sidewalks of Main Street, Beech Street, Cedar Street, and Elm Street, as well as between the existing building structures in the project site.

The project would comply with the City's Municipal Code (Chapter 29 – Street Tree Ordinance, and Chapter 35 – Tree Preservation Ordinance), the Significant Tree Ordinance of San Mateo County (Part Three of Division VIII of the San Mateo County Ordinance Code); and Regulations for the Preservation, Protection,

Removal, and Trimming of Heritage Trees on Public and Private Property (Ordinance Number 2427). Protected trees include landmark trees, street trees, significant trees, indigenous trees, or heritage trees on private or public property anywhere within the territorial limits of the City (Redwood City 2019). None of the trees on the site meet the protected or heritage tree definition. As shown in the project's landscaping plans, the project would include tree replanting. Additionally, per the Arborist Reports, recommendations during project construction would establish a Tree Protection Zone for the trees that would be preserved. Any construction work within the tree protection zone, including additional pruning, accumulation of dust, and watering, would be monitored by a certified arborist. Tree protection fencing would also be implemented. The project would also comply with City's standard conditions of approval, which requires that a tree removal permit be obtained prior to removal of any trees.

With incorporation of local regulation and arborist recommendations, the project would have a **less than significant** impact regarding conflicts with local policies or ordinances protecting biological resources.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans covering the project area. Therefore, construction or operation of the proposed project would have **no impact** on or conflict with habitat conservation plans in the area.

References:

California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB), 2019. Data request for U.S. Geological Survey San Mateo 7.5 minute topographic quadrangle and eight surrounding quads. Accessed February 15, 2019.

Horst Sciences. 2017 Preliminary Arborist Report, South Main Redwood City. October 20.

National Marine Fisheries Service, West Coast Region (NMFS). 2016. Intersection of USGS 7.5" Topographic Quadrangles with NOAA Fisheries ESA Listed Species, Critical Habitat, Essential Fish Habitat, and MMPA Species Data within California. Accessed February 15, 2019.

Redwood City Code and Ordinances, 2019. Tree Preservation Ordinance, Redwood City Rules and Regulations.

Western Bat Working Group (WBWG), 2017. Western Species Accounts. Accessed at http://www.wbwg.org/species _accounts.

4.5 Cultural Resources

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	**Cultural Resources. Would the project:**				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?	☒	☐	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐
c)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

4.5.1 Setting

The project site is situated on level terrain, as depicted in Township 5 South, Range 2 West, Mt. Diablo Base and Meridian of the Palo Alto, Calif. U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles. An open-air, channelized branch of Redwood Creek is adjacent to the northwest side of Parcel A; is culverted under Lathrop Street; then opens again north of Parcel D at the Elm Street and Lathrop Street intersection. The project site is bounded by automobile sales and repair uses, large multi-tenant residential developments, retail uses, and a proposed 109,000 square-foot office building.

Built Resources

The property at 1401 Main Street (APN 053-186-010), located on Parcel E, has the potential to be a historic resource. In 1909, Joseph B. Perry constructed the first iteration of Perry Feed and Fuel within the city block bounded by present-day Main and Shasta Streets to the south, Chestnut Street to the east, Caltrain tracks to the north, and Cedar Street to the west. The family modified the property following a series of fires in 1935, 1948, and 1953. After 80 years of operation, the Perry family sold the property in 1989 to Ben Kopf, who used the site for storage for the Towne Motor Company. The majority of the Perry Feed and Fuel buildings were demolished, with only a circa-1935 corrugated-metal warehouse and a 1969 concrete-block warehouse currently at the property.

In January 1990, consultants Basin Research Associates surveyed the property at 1401 Main Street in Redwood City and recorded the two extant buildings on a three-page Historic Resources Inventory site form. The survey identified the property as consisting of a wood-frame warehouse with a gable roof and corrugated metal siding and “newer (ca. 1965) warehouse…on the north,” (Basin Research Associates, 1990:1). The property was evaluated and the 1935 constructed corrugated metal warehouse was determined eligible for listing in the National Register of Historic Places at the local level under Criterion A for its association with the 19th and early-20th century fuel and feed yard economy; and under Criterion C as a “good example of a fast-disappearing industrial building type: the functional, corrugated-metal warehouse” (AECOM 2019).

Consultants ARG completed an analysis and re-evaluation of the property in August 2018 as part of a report entitled Historic Resource Evaluation, 1401 Main Street, Redwood City, prepared for the project Applicant. The ARG report included a discussion of the 1990 Historic Resources Inventory recordation and provided the document as an appendix to their report. ARG re-evaluated the property under California Register of Historical Resources (CRHR) and Redwood City Historic Landmark criteria and determined that the property was ineligible for listing on either.

Ethnography

The project area is within the territory of the Costanoan—also commonly referred to as Ohlone—language group. The basic Ohlone social unity was the family household, which was grouped together to form villages; which in turn formed tribelets (AECOM 2019). There were approximately 40 Ohlone tribelets, working cohesively;" each tribelet was involved in a network of feasting, trading, and gift-giving" (AECOM 2019).

The Spanish mission system dramatically transformed the Ohlone culture. Many Ohlone were baptized by the Franciscan missionaries and used as manual labor on the mission farms, then later on Mexican ranchos after Secularization (AECOM 2019). Ohlone people currently live within their traditional territory, which includes San Mateo County, and continue to engage in traditional cultural practices.

Records Search

A cultural resources records search of the project area, as well as a surrounding 500-foot buffer, was conducted at the Northwest Information Center (NWIC) on January 9, 2019, to identify previous cultural resource studies and recorded resources in the area (NWIC File Number 18-1254). The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of cultural resource records and studies for San Mateo County. Site records and previous studies were accessed for the project area and buffer on the Palo Alto, Calif. USGS 7.5-minute topographic quadrangles.

Nine previous studies were conducted within the records search buffer, with all 9 of these studies in or directly adjacent to the areas of proposed project impacts. The NWIC records search identified 15 previously recorded cultural resources within 500 feet of the project area. Of these, 3 are within or directly adjacent to the project area.

Survey Methodology

Although there is a lack of ground surface available for inspection due to the paved nature of the project area, a pedestrian survey was conducted by an AECOM archaeologist on January 16, 2019. Any available ground surface was closely inspected.

Survey Results

A single (quarter sized) piece of white earthenware ceramic and a small (inch long), whole marine gastropod (Cerithideopsis californica, common name: California horn snail) were identified in a planter bed on the southwestern side of Elm Street, near the entrance to a surface parking lot. No other possible site constituents were identified.

4.5.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Potentially Significant Impact. The discussion below applies to significance thresholds (a) and (b) as outlined above.

The historical resource evaluation completed for the project found multiple previously recorded cultural resources near and within the project area: both built and archeological resources. Given the extensive previously recorded cultural resources identified, it is possible that earth-disturbing project construction activities could inadvertently damage or destroy recorded and previously unrecorded subsurface cultural resources. In addition, the property at 1401 Main Street (Perry's Feed) is a potential built historical resource. Project implementation could potentially impact cultural resource eligibility. Therefore, the potential to cause a substantial adverse change in the significance of a historical resource or archaeological resource is considered a **potentially significant impact and** would be further analyzed in the EIR.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact. No human remains are known to exist on the project site. However, the lack of surface and record indications does not preclude the possibility that human remains could be present, and inadvertently encountered and damaged, during project construction. In accordance with California Health and Safety Code Section 7050.5(b), if human remains are uncovered during ground-disturbing activities, all such activities in the vicinity of the find shall be halted, and the San Mateo County Coroner and a qualified professional archaeologist shall be contacted immediately. The Coroner is required to examine all discoveries of human remains within 2 working days of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the Coroner determines that the remains are of Native American origin, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The County or its appointed representative and the professional archaeologist shall consult with a Most Likely Descendent determined by the NAHC regarding the removal or preservation and avoidance of the remains and determine if additional burials could be present within the project site.

With incorporation of the procedures outline in California Health and Safety Code Section 7050.5(b), impacts resulting from inadvertent disturbance to human remains would be l**ess than significant.**

References:

AECOM, 2019. Cultural Resources Technical Memorandum to Inform an Initial Study and Environmental Impact Report for the South Main Mixed-Use (1601 El Camino Real) Redevelopment Project, Redwood City, San Mateo County, CA. Accessed April 2019.

_____, 2019. Historical Resource Inventory and Evaluation Report. Accessed April 2019.

4.6 Energy

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

4.6.1 Setting

Grid electricity and natural gas service in Redwood City is provided by PG&E, as regulated by the California Public Utilities Commission (CPUC). PG&E provides electrical service and natural gas to approximately 16 million people throughout its 70,000-square-mile service area in northern and central California. In 2018, PG&E reported that 33%of its electricity in 2017 came from renewable resources, including solar, wind, geothermal, biomass, and small hydroelectric sources. Additionally, nearly 80%of its total electric power mix came from greenhouse gas (GHG)-free sources (PG&E 2019). The power mix PG&E provided to customers in 2017 consisted of non-emitting nuclear generation (24%), large hydroelectric facilities (12%), and eligible renewable resources (33%), such as wind, geothermal, biomass, solar, and small hydro. The remaining portion came from natural gas (17%) and unspecified power (14%). Unspecified power refers to electricity that is not traceable to specific generation sources by any auditable contract trail. In addition, PG&E has plans to increase the use of renewable power (PG&E 2018).

In October 2016, the City Council of Redwood City approved joining Peninsula Clean Energy to provide additional renewable power. Peninsula Clean Energy is a community choice energy program, also known as community choice aggregation (US EPA 2019). PG&E would still deliver the power, maintain the lines, and bill customers, but the power would be purchased by “Peninsula Clean Energy” in San Mateo County. Peninsula Clean Energy plans to have an “ECO 50” and “ECO 100” program that includes 50% and 100% renewable energy, respectively.

4.6.2 Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact.

Construction: Project construction would include the operation of construction vehicles, as well as debris removal. During project construction, equipment operation would comply with BAAQMD standards that are aimed at reducing air pollution. Such standards, including minimizing idling, ensuring proper maintenance, and using the required tier level engines, would also minimize the wasteful consumption of energy resources during construction. Additionally, the project would comply with the City’s Construction and Demolition Debris Program, which requires the diversion of 100% of inert solids (asphalt, brick, concrete, dirt, rock, sand, soil, and stone) from landfill for all demolition projects; and a minimum of 65% of all other construction and demolition debris from new construction, roofing, and alterations / additions (Redwood City, 2019). With implementation of existing standards, the project would not result in wasteful or unnecessary consumption of energy during construction, and impacts would be **less than significant**.

Operation: The project would be required to comply with energy efficiency standards set forth by Title 24 of the California Administrative Code and the Appliance Efficiency Regulations. Title 24 requires that the project meet a number of conservation standards, including installation of water-efficient fixtures and energy-efficient appliances. Title 24 also regulates energy consumption for the heating, cooling, ventilation, and lighting of residential and nonresidential buildings, and is enforced by the City of Redwood City. Compliance with Title 24 would ensure reduction in the use of fuel, water, and energy by the proposed project or variant. Furthermore, the project would comply with CalGreen[3] and the City of Redwood City Municipal Code requirements related to energy and water conservation. Redwood City was ahead of state action in adopting commercial and residential Green Building Codes in 2009 that are equivalent to the state CalGreen Tier 1 energy and water use performance standards.

The project would also provide features that encourage alternative modes of transportation, such as bicycle racks, bike lanes, and greater pedestrian connectivity. Because the project is an infill mixed-use development in a transit-rich area, the project provides opportunities to limit vehicle trips and the associated energy demand. The project would be consistent with the goals of the Plan Bay Area 2040 land use strategy, which seeks to reduce per capita VMT. Specifically, project operation would provide opportunities to minimize VMT through the use of public transit and nonmotorized modes of transportation (e.g., walking and biking) to reach residential and employment destinations and amenities.

Therefore, the project would not result in inefficient, wasteful, and unnecessary consumption of energy, and the impact is **less than significant**.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant Impact. The City's 2013 Climate Action Plan (CAP) was developed to reduce GHG emissions by implementing various strategies and programs at the local level. The CAP identifies the City's existing GHG inventory and estimates emissions for the year 2020 under different scenarios. Based on this, the CAP proposes emission reduction targets to help meet Assembly Bill (AB) 32's regional goals. The CAP recommends various renewable energy, energy-efficiency, and energy conservation strategies over the 15-year period from 2005 to 2020, including polices that are applicable to the project. The project would be consistent with the City's CAP, because it would achieve CALGreen Tier 1 energy performance, and would implement several other energy efficiency measures, including the following:

- Update building code to mandate higher building performance in commercial buildings. Mandate achievement of CALGreen Tier 1 energy performance.
- Update building code to mandate higher building performance in residential buildings. Mandate achievement of CALGreen Tier 1 energy performance.
- Establish a voluntary program that allows businesses to brand as green by following sustainable practices.
- Adopt Bay Area Water Supply and Conservation Agency Indoor Ordinance and enhance its Outdoor Ordinance.
- The City of Redwood City General Plan puts forth the following policies as they relate to energy efficiency, as applicable to the project:
- NR-4.1: Support energy efficiency through the City's Municipal Code Green Building Ordinance
- NR-4.4: Pursue efforts to reduce energy consumption through appropriate energy conservation and efficiency measures throughout all segments of the community.

As shown in Table 4.6-1 below, the project would be consistent with energy efficiency policies.

[3] CalGreen is the mandatory building standards code adopted in California; California Code of Regulations, Title 24, Part 11.

Table 4.6-1 South Main Mixed-Use: Energy Efficiency Measures

Measure	Description	Reductions (MTCO2e)	Project Consistency with Applicable Measures
EM1 Energy Efficient Public Lighting Program	Replace street, parks and parking lot lighting with efficient lighting (LEDs, induction, etc).	50	**Consistent.** The project will propose LED lighting for all public spaces and street lights.
WC1 Raise Solid Waste Diversion Rate	Increase participation in recycling programs and ensure weekly collection of recyclables and organic waste to achieve an 85% waste diversion goal by 2020.	13,968	**Consistent.** Redwood City is implementing a series of programs for recycling materials that reduce the amount of waste the City sends to landfills. Current services for residential users include weekly soil waste collection, single stream recycling, organics recycling, plant materials recycling, and household batteries and cell phone recycling. For commercial users, services include solid waste collection, single stream and source-separated recycling, organics recycling, and plant materials recycling. These programs and services would be available to the project. Additionally, the project would comply with AB 1826—requiring businesses and multifamily residential uses of 5 or more units to recycle organic waste—and SB 1018—requiring businesses that generate 4 cubic yards or more of commercial solid waste per week to arrange for recycling services.
EC1 Commercial Green Building Ordinance	Update building code to mandate higher building performance in commercial buildings. Mandate achievement of CALGreen Tier 1 energy performance. Consider additional mandatory requirements such as solar hot water or cool roofs. Seek to harmonize with regional Green Building Ordinances	948	**Consistent.** The proposed project would replace the existing buildings with newer, more energy-efficient commercial/mixed-use structures. The new buildings would be built to meet the current Building Energy Efficiency Standards and CALGreen Standards.
EC2 Residential Green Building Ordinance	Update building code to mandate higher building performance in residential buildings. Mandate achievement of CALGreen Tier 1 energy performance. Consider additional mandatory requirements such as solar hot water or cool roofs. Seek to harmonize with regional Green Building Ordinances.	1,085	**Consistent.** The City does not require implementation of the voluntary CALGreen energy standards. However, the project would replace the existing buildings with newer, more energy-efficient residential/mixed-use structures. The new proposed buildings would be built to meet the Building Energy Efficiency Standards and CALGreen Standards.
EW2 Water Conservation Ordinance	Adopt Bay Area Water Supply and Conservation Agency (BAWSCA) Indoor Ordinance and enhance BAWSCA Outdoor Ordinance as part of Green Building Codes update in 2014.	6,456	**Consistent.** The project would comply with the City's Recycled Water Development Standards Guide, which is a requirement for all development projects within the recycle water service area.

Measure	Description	Reductions (MTCO2e)	Project Consistency with Applicable Measures
TL1 Smart Growth Development	Continue to implement the policies and programs in City planning documents (e.g., General Plan, Downtown Precise Plan, Zoning Ordinance) to prioritize infill, higher density, transportation oriented and mixed use development.	3,275	**Consistent.** The project would be an infill project that would provide a mix of uses consisting of residential, retail, and commercial space and is consistent with the City's policies to prioritize this type of development. The project site is also in a transit rich area, approximately 1/2-mile from the Redwood City Caltrain Station and Redwood City Transit Center, and one block from the nearest SamTrans bus stop. The project will propose supporting the goals of the RWCmoves Citywide Transportation Plan and the El Camino Real Corridor Plan.
TL2 Complete Streets Pedestrian/ Bicycle Infrastructure	Remake urban landscape to make walking and biking more desirable. Add bike lanes, bike parking, and traffic calming measures according to County and City bike plans.	5,570	**Consistent.** The project proposes urban landscape remaking measures throughout the site, which are consistent with the RWCmoves Citywide Transportation Plan and the El Camino Real Corridor Plan. The project proposes a pedestrian walkway along the east side of Parcel E to provide access to the dog park from Chestnut and beyond. The project also proposes the inclusion of a publicly-accessible, landscaped walkway between El Camino Real and Lathrop on Parcel A along the southern side of Redwood Creek which would serve as a more pedestrian-friendly connection between Downtown and the neighborhoods west of El Camino Real. In addition, as proposed, Lathrop Street would become a pedestrian-focused walkable street complete with a bicycle boulevard which would de-emphasize automobile traffic and encourage pedestrian and bicycle traffic between El Camino Real and Maple Street. On El Camino Real, the project also proposes protected bicycle lanes along the project frontage.
TL4 Parking Policies	Establish parking policies to increase use of walking, public transit and bicycling.	23,916	**Consistent.** The project would propose unbundled parking for the residential building and the applicant is requesting a reduced parking ratio for the commercial component. Additionally, the project proposes bicycle infrastructure improvements throughout the site.

Source: Greystar, 2018

The project would be consistent with these policies, because it would implement the City's Green Building Ordinance and would use several methods outlined above to further minimize energy consumption. Therefore, the project would not conflict with any plans for renewable energy or energy efficiency, and it would have a **less than significant** impact.

References:

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4.7 Geology, Soils, and Seismicity

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. 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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐

4.7.1 Setting

Seismic Hazards

Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active major fault trace. Redwood City and the project site are in the California's Coast Ranges Geomorphic Province, a geologically young and seismically active region (CGS, 2006), with frequent medium earthquakes from nearby epicenters, as well as infrequent major earthquakes.

The Alquist-Priolo Earthquake Fault Zoning Act designates zones that are most prone to surface fault ruptures for the State of California. The zones are defined by the California Geological Survey (CGS), and areas within an Alquist-Priolo earthquake fault zone require special studies to evaluate the potential for surface rupture, to ensure that no structures intended for human occupancy are constructed across an active fault (an active fault is defined

by the State of California as a fault that has had surface displacement within Holocene time, approximately the last 11,000 years).

The project site is not in an Alquist-Priolo earthquake fault zone (CGS, 2006), and the closest such zone trends northwest-southeast approximately 3.25 miles southwest of the project site.

The California Department of Conservation (CDC) has identified several concealed or buried Quaternary faults (more than 1.6 million years old) near the project site, including the Stanford and Palo Alto faults, both of which run roughly parallel to El Camino Real, approximately half a mile south and north of the project site, respectively (CGS, 2006). These faults have evidence of activity between 11,000 years and 1.6 million years ago but are not classified under the Alquist-Priolo Earthquake Fault Zoning Act to be active faults (Redwood City, 2010).

Ground Shaking

The intensity of seismic ground shaking in a particular area depends on the characteristics of the generating fault, distance to the earthquake epicenter, magnitude and duration of the earthquake, and specific site geologic conditions. As shown in Table 4.7-1, there are several regional faults within 30 miles of the project site that have potential to generate strong ground shaking in the region. The U.S. Geological Survey's 2014 Working Group on California Earthquake Probabilities compiled earthquake fault research for the San Francisco Bay Area to estimate the probability of fault segment rupture. They determined that the overall probability of a moment magnitude 6.7 or greater earthquake occurring in the San Francisco Bay Region between 2014 and 2044 is 72%.

According to the Association of Bay Area Governments (ABAG, n.d.) Earthquake Shaking Scenario Map, which predicts the potential for ground shaking during major earthquakes on the active faults in the Bay Area, the project site is in an area that could be subject to “violent” shaking (Level IX on the Modified Mercalli Intensity [MMI[4]] scale) during a magnitude 7.8 earthquake on the San Andreas Fault (northern segments), or “very strong” shaking (Level IIX on the MMI scale) during a magnitude 7.2 earthquake on the San Andreas Fault (Peninsula segment).

Seismic-Related Ground Failure

Seismic-related ground failure may include liquefaction, lateral spreading, and cyclic densification, each of which are addressed in turn below. Geologically, the project site is situated on Holocene-age fine-grained alluvial deposits, primarily consisting of medium-stiff to very-stiff fine-grained deposits with interbedded layers of medium-dense to very-dense granular deposits (Rockridge, 2016). Groundwater levels observed at the site ranged from 6.8 to 8.5 feet below ground surface (bgs), and were anticipated to fluctuate several feet seasonally, depending on the amount of rainfall.

- **Liquefaction** is a phenomenon where loose, saturated, cohesionless soil experiences temporary reduction in strength during cyclic loading such as that produced by earthquakes. Soil susceptible to liquefaction includes loose to medium-dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. The project area is within a liquefaction seismic hazard zone (CGS, 2006), and the preliminary geotechnical report prepared for the project found interbedded thin layers of potentially liquefiable soil underlying the site, some of which were up to approximately 3 feet thick (Rockridge, 2016). The Rockridge report estimates that total “free-field” ground surface settlements associated with liquefaction (referred to as post-liquefaction reconsolidation) within these layers after a major event on a nearby fault would vary from about 0.5 to 1 inch across the site. Because many of the potentially liquefiable layers are relatively shallow and within the likely zone of influence of shallow foundation systems, the actual foundation settlement resulting from liquefaction may be substantially higher than the estimated “free-field” settlements. In addition, if the bottom of proposed foundations were at a depth that rested on potentially liquefiable layers, there is potential for additional foundation settlement due to loss of bearing strength.

[4] The Modified Mercalli Intensity scale is composed of increasing levels of intensity that range from imperceptible (I) to extreme shaking (XII). It does not have a mathematical basis; instead, it is based on observed effects.

Table 4.7-1 Regional Faults and Seismicity

Fault Segment	Approximate Distance from Project Site (km)	Direction from Project Site	Mean Characteristic Moment Magnitude1
Monte Vista Shannon	5.2	Southwest	6.50
N. San Andreas – Peninsula	6.8	West	7.23
N. San Andreas (1906 event)	6.8	West	8.05
San Gregorio Connected	21	West	7.50
Total Hayward	24	Northeast	7.00
Total Hayward-Rodgers Creek	24	Northeast	7.33
Total Calaveras	33	East	7.03
N. San Andreas – Santa Cruz	39	Southeast	7.12
Mount Diablo Thrust	44	Northeast	6.70
N. San Andreas – North Coast	46	Northwest	7.51
Zayante-Vergeles	49	Southeast	7.00

[1] Moment magnitude is an energy-based scale and provides a physically meaningful measure of the size of a faulting event. Moment magnitude is directly related to average slip and fault rupture area.

Source: Adapted from Rockridge Geotechnical, 2016.

- **Lateral spreading** is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. On reaching mobilization, the surficial blocks are transported downslope or in the direction of a free face by earthquake and gravitational forces. The preliminary geotechnical report prepared for the project concluded that the risk of lateral spreading is very low, due to the relatively flat site grades and the absence of a free face in the site topography, as well as the depth and relative thickness of the potentially liquefiable layers (Appendix GEO, Rockridge, 2016).
- **Cyclic densification** (also referred to as differential compaction) is a phenomenon in which non-saturated, cohesionless soil is compacted by earthquake vibrations, causing ground-surface settlement. The preliminary geotechnical report prepared for the project determined that soil above the groundwater table at the site consists of clay, which is not susceptible to compaction by earthquake vibrations; therefore, the potential for cyclic densification is low (Rockridge, 2016).

Landslides

The project site is in a generally flat area with little to no slopes, and with no recorded landslides in the vicinity (ABAG, n.d.). Additionally, the project site is not in an Earthquake-Induced Landslide Zone Area where previous occurrence of landslide movement, or local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements due to seismic shaking (CGS, 2006).

Soils

Soils in the project area are mapped as Urban Land (National Resources Conservation Service [SSURGO Database], 2019. “Urban land” consists of modified soils that have been cut and filled for development purposes. Site-specific investigation of site soils found medium-stiff to very-stiff fine-grained deposits with interbedded layers of medium-dense to very-dense granular deposits (Rockridge, 2016).

4.7.2 Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42

Less than Significant Impact. Because the project site is outside the Alquist-Priolo Earthquake Fault Zone and no known major active faults are present in the project site, there is a low risk of surface rupture related to fault movement. The potential for the project to exacerbate the risk of a rupture of a known fault is non-existent. Therefore, construction or operation of the project would not directly or indirectly cause potential substantial adverse effects due to fault rupture, and the impact would be less than significant.

ii) Strong seismic ground shaking?

Less than Significant with Mitigation Incorporated. The project would not exacerbate the potential for seismic ground shaking, which is a function of the location of the epicenter, the size of the event, and the underlying geological formations, none of which would be affected by construction or operation of the proposed project.

Although construction of additional habitable space in an area that could be subject to violent ground shaking could exacerbate the risk of loss, injury, or death resulting if the building were not adequately designed to reduce potential impacts from seismic shaking, the project would be required to follow the seismic standards of the most recent version of the California Building Code. The Code includes measures to ensure that structures can withstand the maximum expected ground shaking without catastrophic failure. Although complete avoidance of any damage may not be feasible, incorporation of industry-standard seismic design measures in accordance with current building codes would mean that potential impacts associated with strong seismic ground shaking would be less than significant.

Implementation Measure MM GEO-1 requires that a final geotechnical report be prepared prior to final project design; that project plans and specifications be reviewed by a qualified geotechnical engineer prior to construction to confirm that the final design meets the intent of the recommendations in the final geotechnical report; and that a qualified geotechnical engineer be present during construction to observe foundation installation, ground improvement, and fill placement, and revise recommendations based on actual site conditions, if needed.

> ***Mitigation Measure MM GEO-1: Final Geotechnical Report, Plan Review, and Construction Observations***.
>
> Prior to final project design, a qualified geotechnical engineer shall be retained by the Applicant to provide a final geotechnical report, based on additional site investigations, including determination of the presence of expansive soils, as necessary. The final geotechnical report shall include recommendations for foundation design or other measures necessary to conform to the most recent version of the California Building Code. Recommendations of the final geotechnical report shall be implemented within the final project design, and project plans and specifications shall be reviewed by a qualified geotechnical engineer to confirm that the geotechnical recommendations have been adequately incorporated. During construction, a qualified geotechnical engineer shall be retained to observe foundation installation, ground improvements, and fill placement; and to revise geotechnical recommendations in response to site conditions encountered during construction, if necessary.

With conformance to industry-standard seismic design measures, in accordance with current building codes and implementation of Mitigation Measure MM GEO-1 as part of the project, construction and operational impacts of the project relating to seismic ground shaking would be **less than significant**.

iii) Seismic-related ground failure?

Less than Significant with Mitigation Incorporated. Construction and operation of the proposed project would not exacerbate the potential for seismic ground failure, which is a function of the location of the epicenter, the size of the event, and the underlying soil and groundwater levels, none of which would be adversely affected by the proposed project. Depending on the findings and recommendations of the final geotechnical report, soil conditions beneath the site may be improved during construction, which would reduce the potential impacts of liquefaction on the proposed structures.

The proposed project would be required to follow the seismic standards of the most recent version of the California Building Code, which requires measures to ensure that potential settlement and resultant damage from liquefaction is minimized. Although complete avoidance of any damage may not be feasible, incorporation of industry-standard seismic design measures, in accordance with current building codes, would reduce potential impacts from liquefaction and other seismic-related ground failure to less-than-significant levels. The preliminary geotechnical report recommended that the potential for reduction in bearing capacity beneath shallow foundations due to potentially liquefiable soil layers be further evaluated during the final geotechnical investigation, once details of the proposed foundation subgrade elevations have been established.

Implementation of MM GEO-1 (detailed above) requires that a final geotechnical report be prepared prior to final project design; that project plans and specifications be reviewed prior to construction to confirm that the final design meets the intent of the recommendations; and that construction activities be observed by a qualified geotechnical engineer so that recommendations can be revised, if necessary, based on actual site conditions encountered during construction.

With conformance to industry-standard seismic design measures in accordance with current building codes and implementation of MM GEO-1 as part of the project, construction and operational impacts of the project relating to seismic ground failure, including liquefaction, would be **less than significant**.

iv) Landslides?

No Impact. Given the relatively flat topography of the project site, and because the site is not classified as a landslide area, nor is it located near any known landslides, construction or operation of the project would have **no impact** relating to landslide hazards.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact.

Construction. Construction of the project would involve the demolition of existing structures to accommodate the proposed development. The site would then be graded and excavated to form building pads and street and sidewalk grades, followed by construction activities to build the new mixed-used development. These site grading and excavation activities have the potential to cause soil erosion.

As discussed in Section 4.9, Hydrology and Water Quality, disturbances to the property would be greater than 1 acre, requiring coverage under the Statewide National Pollutant Discharge Elimination System (NPDES) General Construction Activities Stormwater Permit (General Permit) through the California State Water Resources Control Board (SWRCB). To obtain coverage under the General Permit, submission of a Storm Water Pollution Prevention Plan (SWPPP) would be required, which requires implementation of Best Management Practices (BMPs) to minimize erosion and topsoil loss. Potential erosion and transportation of soil particles would be managed through standard construction BMPs, such as installation of silt fences, which would substantially reduce potential sediment transport from the construction site. Other BMPs that would be implemented at the site include stabilized construction entrances and storm drain inlet protection. The contractor would also be responsible for maintaining these BMPs in good and effective condition.

With implementation of BMPs required by the SWPPP under the NPDES General Permit, the potential construction impacts related to soil erosion would be **less than significant**.

Operation. Once constructed, the proposed project would be landscaped and/or covered in buildings or hardscape features; therefore, erosion or loss of topsoil would not be expected to continue beyond the construction period. There would be **no impact** related to erosion and topsoil loss from operation of the proposed project.

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?

Less than Significant with Mitigation. Geologically, the project site is situated on Holocene-age fine-grained alluvial deposits, primarily consisting of medium-stiff to very-stiff fine-grained deposits with interbedded layers of medium-dense to very-dense granular deposits (Rockridge, 2016). The project site is not on or near any known landslide deposits and is not anticipated to be subject to landsliding due to the generally flat topography. Discussion of earthquake-induced landslides and other seismic-related ground failure are discussed previously under Impact (a)(iii) and (iv), above. The preliminary geotechnical report stated that native soils at the site are generally over-consolidated, and capable of supporting the proposed buildings on shallow foundations; and concluded that proposed buildings with one or two below-grade levels would likely not exceed the maximum past pressure of the native soil deposits, but that proposed at-grade buildings may experience greater amounts of settlement under static load conditions. The report also identified the need to provide lateral support and dewatering during excavations to avoid impacts on adjacent properties and structures.

The proposed project would be required to be designed in accordance with the most recent version of the California Building Code, which requires site-specific design-level evaluation of underlying materials and their engineering characteristics to minimize the potential total and differential settlement of finished structures, and lateral spread or collapse of excavations during construction. The geotechnical report makes preliminary recommendations on appropriate types and design for proposed building foundations and recommends that foundation design be refined during the final geotechnical investigation, once details of the proposed structures have been confirmed.

Implementation of MM GEO-1 (detailed above) requires that a final geotechnical report be prepared prior to final project design; that project plans and specifications be reviewed prior to construction to confirm that the final design meets the intent of the recommendations; and that construction activities be observed by a qualified geotechnical engineer so that recommendations can be revised, if necessary, based on actual site conditions encountered during construction.

With conformance to industry-standard seismic design measures in accordance with current building codes, and implementation of MM GEO-1 as part of the project, construction and operational impacts of the project relating to unstable soils, would be **less than significant**.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant with Mitigation. Expansive soils owe their characteristics to the presence of swelling clay minerals. When such soils get wet, the clay minerals absorb water molecules, causing the soil to expand; conversely, as they dry out, they shrink. Construction on expansive soils can result in damage to buildings, roads, sidewalks, foundations, underground utilities, basements, and other structures if not appropriately accounted for in design, as a result of changes in soil moisture.

The preliminary geotechnical report identifies the presence of interbedded thin, moderately weak and compressible clay layers within the generally stiff soil profile at the site; but did not test specifically for expansive soils, nor make any recommendations relating to minimizing the impacts of expansive soils (if present) on the project. If not designed appropriately, construction on expansive clays could result in damage to proposed foundations as a result of changes in soil moisture. Although foundations for many of the proposed structures at the site would likely extend below the level of seasonal groundwater fluctuations (and therefore would be unlikely to be subject to shrink-swell movements due to being consistently saturated),

some proposed structures would have shallow foundations, which would be more susceptible to the effects of expansive soils, if present at the site.

Implementation of MM GEO-1 (detailed above) requires that a final geotechnical report be prepared prior to final project design; that project plans and specifications be reviewed prior to construction to confirm that the final design meets the intent of the recommendations; and that construction activities be observed by a qualified geotechnical engineer so that recommendations can be revised, if necessary, based on actual site conditions encountered during construction.

With conformance to industry-standard measures in accordance with current building codes and implementation of MM GEO-1 as part of the project, construction and operational impacts of the project relating to expansive soils would be **less than significant**.

e) 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?

No impact. The proposed project does not include any septic tanks or alternative wastewater disposal. New stormwater, wastewater, and other utilities would be connected to existing utility infrastructure at or adjacent to the site. For these reasons, there would be **no impact** from construction or operation of the project in relation to septic tanks or alternative wastewater treatment systems.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less than Significant with Mitigation. Paleontological resource localities are those sites where the fossilized remains of extinct animals and/or plants have been preserved. Rock formations that are considered of paleontological sensitivity are those rock units that have yielded significant vertebrate or invertebrate fossil remains. These include, but are not limited to, sedimentary rock units that contain significant paleontological resources anywhere within its geographic extent.

The surficial geology of the project site based on mapping by Pampeyan (1993) is the Holocene Fine-Grained Alluvial deposits (Qaf). Pampeyan (1993) describes these deposits as unconsolidated, poorly sorted, organic clay and silty clay, locally contains then well-sorted interbeds of sand and fine gravel, and is generally less than 15 feet in thickness.Cone penetration tests (CPTs) completed during the geotechnical investigations (Rockridge Geotechnical, 2016, 2017a and 2017b) notes the subsurface geology of the project site is alluvium that primarily consists of medium stiff to very stiff fine-grained deposits with interbedded layers of medium dense to very dense granular deposits to the maximum depth explored of about 80 feet below ground surface (bgs). The granular layers consisting of sands, silt and sands mixtures in the CPT logs varied in thickness from 1 to 15 feet and were encountered at depths between 12 and 35 feet bgs.

Based on mapping by Pampeyan (1993) and the interlayed lithologies of the fine-grained and coarse-grained sediments, the upper layers on the CPT logs likely represent the Holocene fine-grained alluvial deposits (Qaf). The deeper layers likely represent the Holocene Medium-Grained deposits (Qam) of Pampeyan (1993) which consist of unconsolidated to moderately consolidated, moderately sorted fine sand, silt, and clayey silt deposits and is generally less than 20 feet in thickness.

The uppermost Pleistocene deposits in the area, those that have the potential to contain fossils, is the Older Alluvium (Qoa) of Pampeyan (1993). These deposits outcrop on the surface approximately one-half mile to the west of the project site and are also likely to underlie the Holocene deposits. Pampeyan (1993) describes the Older Alluvium (Qoa) as weathered, unconsolidated to moderately consolidated gravel, sand and silt. The basal portion of this unit was noted by Pampeyan (1993) to consist of clayey siltstone that contains middle to late (Rancholabrean) Pleistocene vertebrate and plant fossils.

A second geological map of the area was completed by Brabb et al., (1988) was also reviewed as part of this study. The surficial outlines of the various geological units by Pampeyan (1993) are in general agreement with those of by Brabb et al., (1988) but they use different nomenclature for the geological units and have slightly different lithological descriptions. Brabb et al., (1988) mapped the surficial geology as Holocene Basin deposits (Qhb) consisting of very fine silty clay to clay. This unit appears to be equivalent to the Holocene

Fine-Grained Alluvial deposits (Qaf) of Pampeyan (1993). Brabb et al., (1988) mapped the area west and south of the project site as the Holocene Floodplain deposits (Qhfp) and described these sediments as medium to dark gray, dense, sandy to silty clay which may contain localized lenses of coarser grained sediments (silt, sand, and pebbles). This unit appears to be equivalent to the Holocene Medium-Grained Alluvial deposits (Qam) of Pampeyan (1993). Brabb et al., (1988) mapped the Pleistocene unit located west of the project site as the Alluvial Fan and Fluvial deposits (Qpaf) and described them as brown dense gravely and clayey sand or clayey gravel that fines upward to sandy clay. This unit appears to be equivalent to the Pleistocene Older Alluvium (Qoa) of Pampeyan (1993).

The maximum site excavation depths for the two-level below-grade parking garages was is estimated in the geotechnical investigations to be roughly 28 feet bgs (Rockridge Geotechnical, 2016, 2017a and 2017b).

Based on the review of the CPT logs and comparison to lithologic descriptions by Pampeyan (1993) as well as by Brabb et al. (1988), it is unlikely that fossiliferous Pleistocene sediments will be encountered. That is, the Pleistocene Alluvial fan and fluvial deposits (Qpaf) are noted to consist of brown dense gravely and clayey sand or clayey gravel that fines upward to sandy clay. The middle and upper portions of the CPT logs generally consist of fine grained sediments but also contained granular layers that varied in thickness from 1 to 15 feet and encountered at depths between 12 and 35 feet bgs.

However, these granular layers are typically are underlain by finer grained sediments indicating that these granular sediments are within the generally fine grained Holocene Fine-Grained Alluvial deposits (Qaf) by Pampeyan (1993) which is the same as the Holocene Basin deposits (Qhb) of Brabb et al., (1988) or the Holocene Medium-Grained deposits (Qam) of Pampeyan (1993) which is the same as the Holocene Floodplain deposits (Qhfp) of Brabb et al., (1988). That is, since these coarser grained in the upper and middle portions of the CPT logs sediments are underlain by finer grained sediments, it is unlikely that the coarser grained lithologies of the Pleistocene sediments (that general lack these finer grain lithologies) will be encountered in proposed excavation depths of 39 feet bgs.

The Holocene deposits that will be encountered during the proposed excavation activities are considered too young to contain fossils and or not paleontologically significant. Based on the review of geological maps and geotechnical CPT logs, it is unlikely that the fossiliferous Pleistocene sediments will be encountered during the proposed excavations down to a maximum depth of 3928 feet bgs.

However, there is the possibility for discovery of unknown paleontological resources during construction. This impact would be potentially significant and mitigation measures MM GEO-2 and MM TRIBAL -2 shall be required. With implementation of MM GEO-2 and MM TRIBAL-2, which include stop work measures and work training, project impacts would be **less than significant**.

***Mitigation Measure GEO-2: Procedures for Inadvertent Discovery of Paleontological Resources*.**

In the event that sensitive cultural resources are identified during project site preparation or construction activities, work shall be halted until a qualified paleontologist is contacted and makes recommendations. Specifically, if deposits of paleontologist resources are encountered during project construction activities, all work within an appropriate buffer area around the discovery shall be stopped, and a qualified paleontologist meeting federal criteria under 36 CFR 61 shall be contacted to assess the deposit(s) and make recommendations.

If deposits of paleontological materials cannot be avoided by project activities, the City shall confirm that the project Applicant has retained a qualified paleontologist to evaluate the potential historic significance of the resource(s). If the deposits are determined to be non-significant by a qualified paleontologist, avoidance is not necessary. If the deposits are determined to be potentially significant by the qualified paleontologist, the resources shall be avoided if feasible. If avoidance is not feasible, project impacts shall be mitigated in accordance with the recommendations of the paleontologist in coordination with the City and CEQA Guidelines Section 15126.4 (b)(3)(C), which requires implementation of a data recovery plan. The data recovery plan shall include provisions for adequately recovering all scientifically consequential information from and about any discovered paleontological materials and include recommendations for

the treatment of these resources. In-place preservation of the paleontological resources is the preferred manner of mitigating potential impacts, because it maintains the relationship between the resource and the context. In-place preservation also reduces the potential for conflicts with the religious or cultural values of groups associated with the resource. Other mitigation options include, but are not limited to, the full or partial removal and curation of the resource.

The City shall confirm that the project Applicant has retained a qualified paleontologist for the preparation and implementation of the data recovery plan, which shall be conducted prior to any additional earth-moving activities in the area of the resource. The recovery plan shall be submitted to the project applicant and the City. Once the recovery plan is reviewed and approved by the City and any appropriate resource recovery completed, project construction activity within the area of the find may resume. A data recovery plan shall not be required for resources that have been deemed by the qualified paleontologist as adequately recorded and recovered by studies already completed.

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4.8 Greenhouse Gas Emissions

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions. Would the project:					
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

4.8.1 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 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; as a result, infrared radiation released from the 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 are GHGs that are widely accepted as the principal contributors to human-induced global climate change that are relevant to the proposed project:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- 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 (i.e., lifetime) 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 (International Panel on Climate Change [IPCC], 2013). For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 28 tons of CO_2. GHGs with lower emission rates than CO_2 may still 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 GHGs to absorb infrared radiation.

4.8.2 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. The impacts associated with GHG emissions generated by the proposed project are related to the emissions from construction and operation. Off-road equipment, materials transport, and worker commutes during construction of the proposed project would generate GHG emissions. Building operation, energy use, and mobile sources from vehicle trips by residents would also generate GHG emissions. BAAQMD has not adopted thresholds for evaluating GHG emissions from construction activities. However, BAAQMD recommends that the lead agency quantify and disclose GHG emissions that would occur during construction and make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals (BAAQMD, 2017). The proposed project would have the potential to generate GHG emissions that could have a significant impact on the environment. Therefore, this impact is **potentially significant**, and GHG emissions from the proposed project would be further analyzed in the EIR.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. The proposed project could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, resulting in a **potentially significant** impact**.** The proposed project's potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be further analyzed in the EIR.

References:

California Air Resources Board (ARB), 2014. Assembly Bill 32 Overview. Available: https://www.arb.ca.gov/cc/ab32/ab32.htm . Accessed April 2019.

Bay Area Air Quality Management District (BAAQMD), 2017 California Environmental Quality Act Air Quality Guidelines. Available: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed April 2019.

Intergovernmental Panel on Climate Change (IPCC), 2013. Climate Change 2013: The Physical Science Basis. Available: http://www.ipcc.ch/report/ar5/wg1/. Accessed April 2019.

4.9 Hazards and Hazardous Materials

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

4.9.1 Setting

The project site comprises five blocks that currently contain a combination of auto sales, repair, and warehouse space, as well as commercial/industrial buildings, and a former indoor roller rink. Project site areas not containing structures are typically covered with asphalt-paved parking lots and drive aisles. The Caltrain railroad corridor passes along the eastern boundary of the site. Historically, the site was used for various industrial purposes since the 1880s, including tannery, lumber, printing, auto-service, fuel, and feed supply operations (Ramboll, 2016; 2017b; 2017d).

The site is generally flat, with elevations between 17 to 19 feet. Groundwater at the site is approximately 6 to 9 feet bgs (Rockridge, 2018), and is anticipated to flow to the north-northeast (Ramboll, 2016). Site soils are predominantly fine-grained alluvial deposits, including clays, silty clays, and clayey silts down to approximately 15 to 18 feet bgs, underlain by coarser sands, gravely sands, and sandy gravels (Ramboll, 2016).

Phase I Environmental Site Assessments and Screening Level Investigation reports (Appendix HAZ, Ramboll 2016; 2017a through 2017f) were prepared for the site, which included soil and groundwater sampling. Chlorinated volatile organic compounds (VOCs) such as tetrachloroethene (PCE) and trichloroethene (TCE), and

petroleum hydrocarbons were detected in groundwater samples throughout the project site; this is consistent with historic investigations over the last 30 years in the site vicinity that identified a regional groundwater plume in the area. The plume is thought to have originated offsite, although contributions from historic operations at the project site cannot be ruled out (Ramboll 2017a; 2017c; 2017e).

The Screening Level Investigations also detected the following localized areas of contamination at the project site:

- Lead, arsenic, cobalt, chlordane, and petroleum hydrocarbons were detected in soils in some areas of the project site at concentrations exceeding residential screening criteria.
- Groundwater on the southern portion of Block E was found to contain petroleum hydrocarbons at higher levels than associated with the regional plume, which may have been released from historical fuel operations and/or due to undiscovered underground storage tanks (USTs) or similar features at that site.

Sampling results from the Screening Level Investigations were also compared to the Regional Water Quality Control Board's (RWQCB's) Environmental Screening Levels (ESLs) developed to protect construction workers during direct contact with soils and groundwater, which found that lead and arsenic in some areas of the site exceed the applicable construction-worker direct-contact ESL.

4.9.2 Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant with Mitigation Incorporated. The discussion below applies to both significance thresholds (a) and (b) as outlined above.

Construction. Construction of the proposed project would require demolition of existing structures on the project site, and construction of new mixed-use buildings and associated infrastructure, including excavation to approximately 28 feet at parcels A,C,D and E and 39 feet at parcel B, to accommodate building foundations and underground parking garages.

Demolition activities could potentially expose construction workers and the public to hazardous conditions through disturbance of hazardous building materials, because many of the structures on the project site, including the Perry's Feed Store building, are of an age that makes them suspect for containing hazardous building materials such as asbestos-containing materials (ACMs) and lead-based paint (LBP). If ACMs or LBP are present and disturbed during demolition or renovation activities, they could expose workers and the public to potentially hazardous airborne asbestos fibers or lead dust.

Due to the use of typical construction equipment (e.g., gasoline- or diesel-powered machinery) and construction materials (solvents, adhesives, paints) during project construction, there is potential for accidental spills or releases of hazardous materials.

Site-grading activities could potentially expose construction workers and the public to hazardous conditions through disturbance, transportation, or disposal of contaminated soils or groundwater due to the confirmed presence of metals, pesticides, and petroleum hydrocarbons in shallow soils in some areas of the site, at levels exceeding both residential land use and direct worker exposure ESLs; and the presence of a regional groundwater plume containing petroleum hydrocarbons, PCE, TCE, and related degradation products. Grading activities could also result in accidental release of contaminants from the soil to groundwater or air. There is also potential for unknown underground features such as USTs to be encountered during construction; particularly on the southern portion of Block E.

Each of these potential construction-related impacts is discussed in more detail below.

Hazardous Building Materials: Potential exposure to hazardous building materials could be reduced through appropriate identification, removal, and disposal according to applicable regulations. Both the federal Occupational Safety and Health Administration (OSHA) through 29 Code of Federal Regulations (CFR) 1926.62, and California Division of Occupational Safety and Health (Cal-OSHA) through 8 California Code of Regulations (CCR) 1532.1 regulate worker exposure to LBP. These regulations are applicable to construction activities that disturb LBP or lead-based materials, including such activities as demolition, salvage, removal, surface preparation for repainting, renovation, cleanup, and routine maintenance. Compliance requires respiratory protection, protective clothing, housekeeping, special high-efficiency filtered vacuums, hygiene facilities, medical surveillance, and training. No minimum level of lead is specified to activate the provisions of these regulations. Although the regulatory requirements are focused on controlling exposure of construction workers to lead, they also result in reducing the risk of exposure to the general public, through housekeeping requirements to control lead dust through use of HEPA-filtered vacuums, wet cleanup, or other effective methods (Cal-OSHA, 2018).

ACMs are regulated both as a hazardous air pollutant under the Clean Air Act, and as a potential worker safety hazard under the authority of Cal-OSHA. Any ACMs, if present, would need appropriate abatement of identified asbestos prior to demolition or renovation. Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement. The BAAQMD's Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing) is intended to limit asbestos emissions from demolition or renovation of structures, and the associated disturbance of asbestos-containing waste material generated or handled during these activities. The rule addresses national emissions standards for asbestos and requires that the BAAQMD be notified 10 days in advance of any proposed demolition or abatement work on structures with ACMs. All ACMs found on the site must be removed before the start of demolition or renovation activity in accordance with the rule, which contains specific requirements for surveying, notification, removal, and disposal of materials containing asbestos, including use of wetting methods or HEPA exhaust, and collection methods to prevent emissions from ACMs (BAAQMD, 1998). Mitigation Measure HAZ-1 requires that a survey for hazardous building materials be undertaken at the site, and that any hazardous building materials (if present) be properly removed and disposed of by a certified contractor prior to demolition or renovation activities, in accordance with applicable laws.

Mitigation Measure HAZ-1: Hazardous Building Materials Survey and Abatement

Prior to building permit issuance for demolition or renovation activities of any structures, the applicant shall retain a certified hazardous waste contractor to determine the presence or absence of building materials or equipment that contains hazardous materials, including asbestos and lead-based paint. If such substances are found to be present, the contractor shall properly remove and dispose of these hazardous materials in accordance with federal and state law. All removal activities shall be completed prior to permit issuance for demolition activities. Following completion of removal activities, the applicant shall submit documentation to the Bay Area Air Quality Management District and the City verifying that all hazardous materials were properly removed and disposed.

Implementation of Mitigation Measure HAZ-1 and compliance with applicable local, state, and federal regulations would ensure hazardous building materials are appropriately handled, transported, and disposed of during demolition or renovation; and that adequate precautions to prevent potential exposure to workers or the public would be taken. This would reduce construction impacts related to hazardous building materials to **less than significant.**

Use of Hazardous Materials: Construction activities would require the use of limited quantities of typical construction-related hazardous materials such as fuels, oils, solvents, and glues; which if spilled, could either result in soil or groundwater contamination, enter stormwater runoff, or expose workers to hazardous materials. The project would obtain coverage under the SWRCB's Construction General Permit, because the

project site is greater than 1 acre. As part of the Construction General Permit, the contractor would be required to prepare and implement an SWPPP that would include BMPs to prevent accidental spills of hazardous materials during construction. Such BMPs would include:

- Following manufacturer's recommendation on the use, storage, and disposal of chemical products;
- Maintaining vehicles and construction equipment in proper working condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials;
- Providing secondary containment for any hazardous materials temporarily stored onsite;
- Properly disposing of discarded containers of fuels and other chemicals; and
- Staging construction equipment and equipment washing only in designated locations where spills or washing water cannot flow into drainage channels.

With adherence to applicable federal, state and local regulations, and implementation of BMPs in the project SWPPP, the impact to the public or environment from use or accidental release of a hazardous material during construction would be **less than significant**.

Soil and Groundwater Contamination: The Phase I Environmental Site Assessments and Screening Level Investigation reports (Ramboll 2016; 2017a through 2017f) identified the presence of a regional groundwater plume, containing the VOCs TCE and PCE and petroleum hydrocarbons, that extends beneath the project site. The presence of contaminated groundwater beneath the site poses potential risks to construction workers through direct contact during site excavations; and to the general public if dewatering effluent generated during construction is not appropriately handled, transported, and disposed of.

The Screening Level Investigation reports also identified localized areas of the project site where metals, pesticides, and petroleum hydrocarbons are present in shallow soils at levels exceeding regulatory screening levels for residential land use. Some of these areas also exceed the regulatory screening levels for direct construction-worker exposure and/or the thresholds for categorization of hazardous waste. The report concludes that these areas are generally shallow in extent and would likely be excavated during the proposed redevelopment. If adequate precautions are not taken during such excavation, there is potential for exposure of construction workers or the public to hazardous materials through dermal (skin), respiratory (inhalation), or ingestion pathways. In addition, the Screening Level Investigation report for the southern portion of Block E concluded that the detections of petroleum hydrocarbons in site soils in this location could possibly be due to the presence of an undiscovered UST or other underground feature. If such features are present at the site, additional areas of contamination could be discovered, and/or heavy construction equipment could damage/puncture these features, causing a release of hazardous materials or other safety hazards. In addition, it is noted that the Phase I Environmental Site Assessment (ESA) and Screening Level Investigation report for Parcel E did not identify the presence of the adjacent railroad as a potential source of contamination; and although a soil sample was collected from near the railroad boundary, not all constituents associated with railroad-related contamination were analyzed. Therefore, it is possible that additional constituents such as polycyclic aromatic hydrocarbons (PAHs) could be present in soils immediately adjoining the railroad corridor, given the long-term presence of a railroad on the adjacent site.

MM HAZ-2 requires preparation and implementation of an SMP, which includes procedures and protocols for minimizing worker exposure to contaminated materials, and ensuring that contaminated soils and groundwater are handled, transported, and disposed of in a manner that does not create a significant environmental or human health risk. MM HAZ-2 also requires that worker safety procedures are in place; and that a contingency plan is prepared, and would be implemented if additional, currently unknown, contaminants or underground features are encountered during site development activities.

Mitigation Measure HAZ-2: Site Mitigation Plan

Prior to the issuance of a grading permit and before any substantial ground disturbance, the Applicant shall hire a qualified environmental professional to prepare an SMP for the project site. The SMP, and any remedial actions required as part of it, shall be implemented by the Applicant and its contractors to the satisfaction of the relevant oversight agencies (City of Redwood City Fire Department, San Francisco Bay Regional Water Quality Control Board (RWQCB), and/or designated San Mateo County or State Department oversight agency, or other appropriate agency having jurisdiction) to ensure sufficient minimization of risk to human health and the environment is completed.

At a minimum, the SMP shall:

- Establish minimum requirements for worker training and site-specific health and safety plans, to protect the general public and workers in the construction area (note: these requirements and all previous environmental sampling results shall be provided by the Applicant to all contractors, who shall be responsible for developing their own construction worker health and safety plans and training requirements).
- Establish appropriate site-specific cleanup targets for site soils that are protective of human health and the environment, based on the proposed future land uses(s). At a minimum, these targets shall be equal to, or more protective than the RWQCB ESLs for Residential Use; or in the case of contaminants that have naturally occurring background levels that exceed the residential ESLs, the target shall be equal to, or more protective than, the regional background level for that contaminant.
- Identify and implement measures such as excavation, containment, or treatment of the contaminated soils to achieve the plan's cleanup targets, and/or to provide protection of future site users from exposure to remaining soil (if any) that exceed the plan's clean-up targets, including:

- Description of post-excavation confirmation sampling requirements. If residual contamination remains at the site above the site-specific cleanup targets, include appropriate controls, including institutional controls where and if necessary, to assure that activities by future users do not expose them to unacceptable health and safety risks. Such controls may include, but are not limited to, visual barriers over contaminated soil, followed by a cap of clean soil or hard surface materials; operation and maintenance protocols for any disturbance of contaminated soils; and recording of deed restrictions, such as activity and use limitations, with the San Mateo County Recorder's Office to assure that the remedy is maintained.

- If excavated soils are to be reused onsite, characterization shall be undertaken to determine that such materials do not exceed the established clean up targets for the site, or that such reused materials are subject to appropriate controls, as described in the bullet point above for addressing residual contamination.

- If excess materials are off-hauled, waste profiling of the material shall be completed and documented. Materials classified as nonhazardous waste shall be transported under a bill of lading. Materials classified as hazardous waste shall be transported under a hazardous waste manifest. All materials shall be disposed of at an appropriately licensed landfill or facility.

- Trucking operations shall comply with the California Department of Transportation and any other applicable regulations, and all trucks shall be licensed and permitted to carry the appropriate waste classification. The tracking of dirt by trucks leaving the project site shall be minimized by cleaning the wheels on exiting and cleaning the loading zone and exit area as needed.

- Establish procedures for dewatering of construction excavations and/or dewatering of excavated sediments prior to off-hauling (if required), consistent with federal, state, and local regulations, specifying methods of water collection, handling, transport, treatment, discharge, and disposal for all water produced by dewatering activities.

- Identify measures to protect future site users from contact with contaminants from the regional groundwater plume, including intrusion of soil-gas vapors emitted from the plume. Such measures may include vapor extraction systems, vapor intrusion barriers, operation and maintenance protocols for any disturbance of groundwater; and recording of deed restrictions, such as activity and use limitations, with the San Mateo County Recorder's Office to assure that the implemented remedy(ies) is maintained.
- Include contingency measures to address unanticipated conditions or contaminants encountered during construction and development activities. The contingency measures shall establish and describe procedures for responding in the event that unanticipated subsurface hazards or hazardous material releases are discovered during construction, including appropriately notifying nearby property owners, schools, and residents, and following appropriate site control procedures. Control procedures would include, but not be limited to further investigation; and if necessary, remediation of such hazards or releases, including off-site removal and disposal, containment, or treatment. If unanticipated subsurface hazards or hazardous material releases are discovered during construction, the contingency measures addressing unknown contaminants shall be followed. The contingency measures shall be amended as necessary if new information becomes available that could affect implementation of the measures.

Implementation of MM HAZ-2 would reduce potential construction-related impacts related to subsurface soil and groundwater contamination to **less than significant**.

Operation

Hazardous Building Materials: Operation of the proposed project would potentially expose future users of the Perry Feed Store building to asbestos fibers or LBP dust, if any such materials remained in the building following its renovation and repurposing. Such an impact could be potentially significant, particularly during any future renovation activities that might further disturb existing materials. However, as discussed above in relation to construction impacts, Mitigation Measure HAZ-1 would require any such hazardous building materials to be properly removed from all structures on the project site (including the Perry's Feed Station building) in accordance with federal and state law. Implementation of Mitigation Measure HAZ-1 would therefore reduce potential exposure to such hazardous building materials from operation of the proposed project to **less than significant**.

Use of Hazardous Materials: During operation of the project, residential occupants would use typical quantities of common commercially available household hazardous materials such as cleaning and maintenance supplies. Such products are labeled with appropriate cautions and instructions for handling, storage, and disposal; and do not represent a significant threat to human health and the environment. Similarly, landscaping or maintenance activities at the site may require the use of limited quantities of industry standard hazardous materials such as herbicides or pesticides, but not in such a manner as to represent a significant threat to human health and the environment.

The majority of commercial uses allowable under the project site's Mixed Use Corridor – El Camino Real (MUC-ECR) and Mixed Use – Live/Work (MULW) zoning[5] would not require the use, handling, or storage of quantities of hazardous materials in excess of regulatory thresholds.[6] Although some allowable or conditional uses such as laboratory research and development, limited industrial, or repair and maintenance facilities could potentially use, handle, or store quantities of hazardous materials above the regulatory thresholds, there is an established comprehensive regulatory framework independent of the CEQA process that would be followed, including preparation and submittal of a Hazardous Materials Business Plan to the San Mateo County Environmental Health Department, which is the Certified Unified Program Agency with jurisdiction over the project site.

[5] Allowable uses in the MUC-ECR and MU-LW zones are described in Tables 53-1 and 55-1 of the Redwood City Zoning Ordinance, respectively (City, 2018).

[6] The thresholds are 55 gallons for a hazardous liquid; 500 pounds of a hazardous solid; 200 cubic feet for any compressed gas; or threshold planning quantities of an extremely hazardous substance, per Chapter 6.95 of the California Health and Safety Code.

The types and amounts of hazardous materials used at the project site under the proposed project would not pose any greater risk of upset or accident than the existing uses at the site, or at other similar development elsewhere in the City. The proposed project would not involve industrial manufacturing or processing activities that would use large amounts of hazardous materials or acutely hazardous materials, which typically pose a health risk if accidentally released. Compliance with existing regulations would assure proper transportation, use, storage, and disposal of hazardous materials, and the operational impacts of the proposed project would be **less than significant**.

Exposure to Soil or Groundwater Contamination: As discussed previously, the project site contains shallow soil contamination, and is located above a regional PCE groundwater plume. If such contaminants are not adequately addressed during construction, and/or controls emplaced to protect future site users from exposure to any residual contamination that may remain at the site post-construction, a potentially significant impact could result.

The Screening Level Investigations prepared for the project site detected lead, arsenic, cobalt, chlordane, and petroleum hydrocarbons in soils in some areas of the project site at concentrations exceeding residential screening criteria (Ramboll 2017a; 2017c; 2017e). Although the majority of shallow soil would be removed during site preparation and construction activities, if appropriate measures are not taken during construction to adequately dispose of such contaminated soils, and/or to confirm that all soils exceeding residential screening criteria are removed from the site, the potential for future resident exposure would remain significant.

Because the source of the regional groundwater plume is unknown and believed to come from offsite, construction and development activities at the site would not remove the source of contamination, and contaminated groundwater would remain at the site following construction activities. PCE is a VOC that can off-gas from groundwater to contaminate the soil-gas within pores of the soil, and which has potential to migrate into structures if not adequately designed to prevent vapor intrusion. Exposure of future occupants to soil-gas vapor intrusion is therefore a potentially significant impact.

Implementation of Mitigation Measure HAZ-2, detailed above, requires preparation and implementation of an SMP, which would establish site-specific cleanup targets for soil at the site, and would require post-excavation confirmation sampling to confirm that soil remaining at the site contains levels of contaminants below the site-specific targets. These targets would be equal to, or more protective, than the RWQCB residential screening criteria, or regional background levels for constituents (such as arsenic), which naturally exceed the residential screening criteria in the Bay Area. The SMP also requires that appropriate controls are developed and implemented if it is not feasible to remove all contaminated soil, so that future users of the site would be protected from exposure to any residual contamination remaining post-excavation.

In addition, the SMP required by Mitigation Measure HAZ-2 would identify measures to protect future site users from contact with contaminants from the regional groundwater plume, including intrusion of soil-gas vapors emitted from the plume. Such measures may include vapor extraction systems, vapor intrusion barriers, operation and maintenance protocols for any disturbance of groundwater, and recording of deed restrictions, such as activity and use limitations, with the San Mateo County Recorder's Office to assure that the implemented remedies are maintained. This would reduce the risk of future site users being exposed to hazardous emissions to a less-than-significant level.

Implementation of Mitigation Measure HAZ-2 would reduce potential operational impacts related to subsurface soil and groundwater contamination to **less than significant**.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant with Mitigation. Wings Learning Center at 1201 Main Street, Redwood City, is approximately 150 feet to the north of the project site. Other nearby schools, including Hoover Community School (701 Charter Street); KIPP Excelencia Community Prep (656 Laurel Street), North Star Academy, and McKinley Institute of Technology (both at 400 Duane Street), Hawes Elementary School (909 Roosevelt

Avenue), and Redeemer Lutheran School (468 Grand Street), are all at least 1,800 feet from the project site, and are therefore more than 0.25 mile away (CDE, 2019).

Wings Learning Center is a private non-profit school for children with autism, serving approximately 40 students from kindergarten through 12th grade. The school does not have large outdoor playgrounds or sports fields like the majority of public or private schools; however, it does have a small, fenced outdoor yard on the corner of the school property closest to the project site (Wings Learning Center, 2017).

As discussed under Impacts a and b above, project construction would include handling of typical quantities of hazardous materials such as fuels, lubricants, and paints; however, this is not anticipated to pose a significant risk to students attending the school, because the relevant regulations and BMPs designed to protect the construction workers themselves, who would be directly handling such materials, would also protect any nearby students or other sensitive receptors on adjacent sites. Although children can be more susceptible to exposure of hazardous materials than adults, the quantity and type of hazardous materials used during construction of the proposed project would not result in exposure pathways for school students.

Construction of the project may also require the handling of hazardous building materials, such as LBP or ACMs, and/or contaminated soils or groundwater. If appropriate precautions are not taken during construction, the handling of such hazardous materials could expose students to hazardous emissions through fugitive dust containing lead paint dust or other contaminants, or through the release of asbestos fibers into the atmosphere. This impact would be potentially significant, because even low levels of lead in the blood can cause health impacts for children (EPA, 2019).

Implementation of mitigation measures MM HAZ-1 and HAZ-2 would reduce the potential impacts on school students from emissions of hazardous materials during construction to a less-than-significant level. Mitigation Measure HZ-1 requires that pre-demolition surveys be undertaken to identify potentially hazardous building materials at the site, so that appropriate precautions can be taken to adhere with applicable local, state, and federal laws. Compliance with such laws require lead-safe best practices such as use of HEPA filter vacuums or wet cleanup methods to control lead dust, which would reduce potential impacts to students at nearby schools from hazardous building materials to a less-than-significant level.

Mitigation Measure HAZ-2 requires that an SMP be prepared and implemented, which would, among other requirements, require site-specific health and safety plans to protect the general public and construction workers, and contingency procedures in case additional unknown contamination is discovered during construction. Such measures would also serve to protect nearby sensitive receptors such as school students, thereby reducing potential impacts to a less-than-significant level.

Therefore, the impacts of construction or operation of the project from emissions or handling of hazardous materials within 0.25 mile of a school would be **less than significant**.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant with Mitigation. The project site is included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cal-EPA, 2019a through 2019c; DTSC, 2019a; SWRCB, 2019a), also known as the Cortese list. The following Cortese listing is within the project site boundaries:

- Leaking Underground Storage Tank (LUST) Site T0608100547, Towne Ford Sales, is located on the 1601 El Camino Real parcel, which is in Block B of the project site. Documentation associated with the listing indicates that a leak from a UST was detected in 1988, and the case was assigned a status of “Completed – Case Closed” in 1995. Contaminants of concern were waste motor/hydraulic/lubricating oil (SWRCB, 2019b). Additional details regarding the site were obtained from the San Mateo County Environmental Health Department (Environmental Health), and summarized in the Phase I report (Ramboll, 2016). The waste oil tank, sump, and associated piping

were removed from the eastern portion of Block B in October 1986. Environmental Health issued no further action for the LUST in October 1995, based on the conclusion that soil and groundwater impacts related to the LUST had been sufficiently remediated, and the agency's conclusion that the VOCs identified in groundwater were not related to the LUST or associated sump (Ramboll, 2016). More recent sampling in the vicinity of the former LUST did not detect any petroleum hydrocarbons above the laboratory detection limits (Ramboll, 2017a).

Five other Cortese list sites are immediately adjacent to the project site:

- Department of Toxic Substances Control (DTSC) Cleanup Site 60001045, Former Demma Parcels – 104 and 112 Cedar Street. Directly across Cedar Street from Block C. This site is in the Envirostor database as an Evaluation site, with a cleanup status of "Refer: 1248 Local Agency as of 6/115/2006" (DTSC, 2019b). Documentation associated with this listing shows that soil and groundwater samples collected at the site in 2006 contained lead, petroleum hydrocarbons, and halogenated VOCs at concentrations exceeding RWSCQ ESLs; and that the County's Environmental Health Department assumed the role as regulatory oversight agency for characterization and potential remediation of the site (SMCEH, 2006). In a letter dated May 28, 2009, the RWQCB confirmed that no further action was required in relation to issues identified at 104-112 Cedar Street and noted the chlorinated solvent detections as indicative of concentrations known to be present in the area, from an unknown source.

- LUST Site T0608100119, Chevron 9-4256 – 1502 El Camino Real. Directly across El Camino Real from Block A. This LUST Site was granted a cleanup status of "Completed – Case Closed" in 1997 and is therefore unlikely to be impacting soil or groundwater at the project site (SWRCB, 2019c).

- LUST Site T0608100686, RMC Lonestar – 25 Maple Street. Directly across Maple Street from Block A. This LUST Site was granted a cleanup status of "Completed – Case Closed" in 1996 and is therefore unlikely to be impacting soil or groundwater at the project site (SWRCB, 2019d).

- LUST Site T0608100780, Feriante Property – 1612 El Camino Real. Directly across El Camino Real from Block B. This LUST Site was granted a cleanup status of "Completed – Case Closed" in 1999 and is therefore unlikely to be impacting soil or groundwater at the project site (SWRCB, 2019e).

- LUST Site T0608100848, Chub's Auto Repair– 1180 Main Street. Directly across Elm Street from Block D. This LUST Site was granted a cleanup status of "Completed – Case Closed" in 1993 and is therefore unlikely to be impacting soil or groundwater at the project site (SWRCB, 2019f).

It is noted that the known chlorinated solvent groundwater plume affecting the project site and surrounding areas is not on the Cortese list. This case, known as Redwood City Solvent Detections (T10000004815 at 1600 El Camino Real) is in the Geotracker database as a Cleanup Program Site[7], which is not described in Government Code, Section 65962.5 (Cal-EPA, 2019a). Nonetheless, this plume has impacted groundwater beneath the project site, and impacts related to this contamination are discussed under Impacts a and b, above.

Although the project site is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, this listing does not represent a significant hazard to the public or the environment from construction or operation of the project, because the case has been closed for several years, and recent soil and groundwater sampling in the vicinity of the former LUST did not detect any of the potential contaminants of concern associated with the listing. Cortese List sites on adjacent properties are similarly in a

[7] Cleanup Program Sites includes all "non-federally owned" sites that are regulated under the State Water Resources Control Board's Site Cleanup Program and/or similar programs conducted by each of the nine Regional Water Quality Control Boards. Cleanup Program Sites are also commonly referred to as "Site Cleanup Program sites". Cleanup Program Sites are varied, and include but are not limited to pesticide and fertilizer facilities, rail yards, ports, equipment supply facilities, metals facilities, industrial manufacturing and maintenance sites, dry cleaners, bulk transfer facilities, refineries, mine sites, landfills, RCRA/CERCLA cleanups, and some brownfields. Unauthorized releases detected at Cleanup Program Sites are highly variable, and include but are not limited to, hydrocarbon solvents, pesticides, perchlorate, nitrate, heavy metals, and petroleum constituents (SWRCB, 2019g).

"case closed" status, and do not represent a significant hazard to the public or the environment from construction or operation of the project.

With implementation of Mitigation Measure MM HAZ-1 and MM HAZ-2, construction and operation of the project would have a **less than significant impact** in relation to Cortese List hazardous materials sites.

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?

No impact. The nearest airport to the project site is the San Carlos Airport. However, the project site is more than 3 miles from this airport and is not located within its airport land use planning area (ESA, 2015). Therefore, the project would not result in a safety hazard or excessive noise related to airports.

The construction or operation of the project would have **no impact** with respect to airports.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact.

Construction: Construction of the proposed project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. The Regional Emergency Coordination Plan (RECP; Governor's Office of Emergency Services et al., 2008) provides an all-hazards framework for collaboration among responsible entities, and coordination during emergencies in the San Francisco Bay Area. The RECP defines procedures for regional coordination, collaboration, decision-making, and resource sharing among emergency response agencies in the Bay Area. The RECP and its subsidiary plans define responsibilities among the multitude of interested and affected agencies and organizations and identify general response strategies. The Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan, an annex to the RECP, designates priority transportation routes to serve as the principal transportation routes for critical movement of evacuees and emergency service workers through the region (CalEMA et al., 2011). These routes have a priority for inspection, debris removal, and re-opening. The following priority transportation routes are identified in San Mateo County:

- SR 82 (El Camino Real) south to U.S. 101; and south on U.S. 101 to a point where travel can occur to the east.

The County of San Mateo Sheriff's Office has developed an emergency operations plan that establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the San Mateo County Operational Area (County Sheriff et al., 2015). The basic plan describes the County's general response to emergency management, and incorporates annexes containing the detailed actions and policies needed based on the type of disaster. Neither the basic plan, nor the annexes, identifies specific evacuation routes.

Construction activities at the project site could result in temporary lane closures, increased construction truck traffic, and other roadway effects on El Camino Real and other local roads that could impede emergency response or evacuations. However, these effects would be temporary, and would dissipate once trucks have cleared the public right-of-way. Construction activities would not fundamentally alter emergency response and evacuation routes in the vicinity of the project site, which would generally remain unchanged from existing conditions. Although these construction impacts would be less than significant in relation to emergency and evacuation plans, the implementation of a Construction Traffic Management Plan in accordance with City's condition of approval 63, would further reduce these impacts. Therefore, project impacts would be **less than significant**.

Operation: As described above, there are no identified evacuation routes in proximity to the project site. The proposed project design would be reviewed by the Redwood City Fire and Police departments prior to approval to ensure that the project has adequate ingress and egress; incorporates additional design features

(setbacks, clearances, turning radii, etc.); and does not impede emergency access. The Redwood City Department of Public Works would review roadway improvements for compliance with the *Redwood City Standard Details for Improvements in Public Right of Way* (2014), which would ensure adequate access to the project site and individual residences for emergency response purposes. Therefore, the potential impact related to emergency and evacuation plans would be **less than significant**.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less than Significant Impact. The project site is not in a State Responsibility Area or a Very High Fire Hazard Severity Zone and is more than 1.5 miles from the nearest such area or zone (CAL FIRE, 2007; 2008). The City has adopted CAL FIRE's recommended fire hazard severity zones within the City's jurisdiction (City, 2010).

Areas outside of Very High Fire Hazard Severity Zones are not subject to special development controls relating to heightened fire protection, or vegetation management required to minimize the risk of wildland fires. However, new construction at the project site would be subject to standard fire code and fire suppression requirements. The project site is in a highly urbanized area with relatively flat topography and good accessibility for emergency response. The project site is served by the Redwood City Fire Department, who would review the proposed project design prior to approval to check that adequate ingress and egress and additional design features (setbacks, clearances, turning radii, etc.) are incorporated so that the project does not impede emergency access. Due to these factors, the proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. The impact would be **less than significant**.

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4.10 Hydrology and Water Quality

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**Hydrology and Water Quality. Would the project:**				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
	(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
	(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
	(iv) impede or redirect flood flows?	☐	☐	☒	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

4.10.1 Setting

The project site is in the Redwood Creek watershed, which includes approximately 11.8 square miles; and encompasses portions of the City of Redwood City, the Town of Woodside, and unincorporated areas of San Mateo County. Major tributaries include Arroyo Ojo de Agua, Emerald Branch, Stulsaft Branch, Kensington Branch, and the Jefferson Branch.

The main branch of Redwood Creek passes adjacent to the project site. A below-ground channelized portion flows northwest within the El Camino Real right-of-way (adjacent to Parcels A and B of the project site), before daylighting into an open, concrete-lined channel that flows northeast along the southern side of Maple Street (adjacent to Parcel A). North of the railroad, the creek flows through a reinforced-concrete box to the Bradford Pump Station. From the Bradford Pump Station, the drainage is pumped into an earthen channel that crosses beneath U.S. 101, and then flows north within a channel into the San Francisco Bay. Between Bair Island and the Port of Redwood City, Redwood Creek widens to a small-craft navigable bay channel containing a mix of fresh water flowing from the creek, and the salt water of San Francisco Bay.

The project site comprises several city blocks, predominantly containing paved surface parking lots, with some existing commercial buildings and landscaping areas (see Table 4.10-1). The total pervious area of the project site is approximately 0.3 acre, or 3.6% of the total area of the project site, with the remainder of the site primarily impervious surfaces or partially pervious (e.g., compacted dirt with limited drainage). The majority of the project site runoff drains generally by surface flow to the street gutters along parcel frontages, where it is collected into a public storm drain system. The storm drain system drains to an existing 18-inch-diameter concrete pipe in Lathrop Street, draining north to the Redwood Channel just north of Elm Street. The portion of the project to the east of Main Street drains towards the Caltrain right-of-way, where it drains through pipes ranging from 10 to 15 inches in diameter crossing the Caltrain tracks.

Table 4.10-1 Existing Impervious/Pervious Areas of Project Site

Surface Type	Parcel A (sf)	Parcel B (sf)	Parcel C (sf)	Parcel D (sf)	Parcel E (sf)	Total Project Site (acres)
Building Roof (impervious)	12,343	34,066	15,586	18,404	28,544	2.5
Pavement (impervious)	62,972	20,062	47,963	34,774	41,601	4.76
Compacted Dirt / Gravel (partially pervious)	0	0	1,370	0	31,716	0.76
Landscape pervious area *(% total area)*	4,766 *(6.0%)*	164 *(0.3%)*	213 *(0.3%)*	2,216 *(4.0%)*	5,500 *(5.1 %)*	0.3 *(3.6%)*
Total Area	80,081	54,292	65,132	55,394	107,361	8.32

sf = square feet

Sum of parts may not match total due to rounding.

Source: Talus Engineering, 2018

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps, the project site is not within a 1% annual chance of flood zone (also referred to as the 100-year flood zone). The entire project site is in Zone X: the portion of the site to the west of Main Street is identified as having a 0.2% annual chance of flood hazard (i.e., within the 500-year flood zone), while the portion of the site to the east of Main Street is identified as "areas of minimal flood hazard" (FEMA, 2019). The project site is not in a tsunami inundation area (County 2009). Portions of the project site are in the predicted inundation area for failure of the Lower Emerald Lake dam (Redwood City, 2010a).

The Santa Clara Valley groundwater basin, San Mateo Plain, is beneath the project site and is currently designated as a "very low priority" basin[8] by the Department of Water Resources (DWR, 2014; 2019). The San Mateo Plain consists of a shallow aquifer and a deep aquifer separated by a confining layer of Old Bay Mud. Groundwater recharge of the deep aquifer primarily occurs in the unconfined layer near the foothills further to the west, but the shallow aquifer is recharged throughout the urbanized area between the foothills and the Bay. Groundwater levels at wells in the vicinity of the project site are approximately 6 to 12 feet bgs (Rockridge, 2016).

Regulatory Framework

The Clean Water Act (CWA) (33 United States Code [USC] 1251 et seq.) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The act prohibits discharge of pollutants into the nation's waters unless specifically authorized by a permit. CWA Section 404 establishes the permitting program that regulates dredge or fill material in waters of the United States. CWA Section 402

[8] Priority levels represent the statewide assessment of the overall importance of groundwater in meeting urban and agricultural demands, based on the evaluation of the eight required data components specified in the California Water Code. Low and Very Low Priority groundwater basins generally have few people, limited irrigation, and little to no groundwater use and are not prioritized for monitoring under the California Statewide Groundwater Elevation Monitoring Program (DWR, 2015). DWR is currently in the process of updating basin prioritization; however, the San Mateo Plain basin is still proposed to be "very low" priority in the 2019 rankings (DWR, 2019).

establishes a permitting program for the discharge of any pollutant (other than dredge or fill material) into waters of the United States. In California, Section 402 permits are issued by the SWRCB) and RWQCBs.

The Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.) is the primary state law that protects surface water and groundwater in California. The act requires projects that are discharging or proposing to discharge waste that could affect water quality, to file a report of waste discharge with the appropriate RWQCB. The act also provides for the development and periodic reviews of Water Quality Control Plans or "Basin Plans," which designate beneficial uses for surface water and groundwater resources, establish water quality objectives to protect those uses, and guide implementation programs to attain those objectives. The RWQCB has developed the San Francisco Bay Basin Plan in accordance with the Porter-Cologne Water Quality Act. Basin Plan policies are primarily implemented through the NPDES permits.

The SWRCB administers the statewide NPDES program. Stormwater discharges associated with construction and land disturbance activities are regulated under the Construction General Permit (Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended). This permit applies to projects that have one or more acres of soil disturbance. The permit requires that a project proponent develop and implement a construction site SWPPP that specifies management activities, including stormwater BMPs, erosion and sedimentation controls, run-on and runoff controls, and dewatering procedures for nuisance-water removal. The project would seek coverage under the Construction General Permit by filing permit registration documents with the SWRCB and developing and implementing an SWPPP. Compliance with the Construction General Permit is overseen and enforced by the RWQCB.

The San Francisco Bay RWQCB also regulates stormwater discharges from municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara Counties, and the cities of Fairfield, Suisun City, and Vallejo, under a single Municipal Regional Permit (Order No. R2-2015-0049, NPDES Permit No. CAS612008). This permit includes provisions for new development and redevelopment projects (RWQCB 2015). Provision C.3 requires source control, site design, and stormwater treatment measures to address stormwater pollutants, and to prevent increases in flow rates from developed areas. Projects are required to evaluate opportunities for incorporating low-impact development strategies, such as self-treating/self-retaining landscape areas, stormwater re-use, on-site infiltration, and evapotranspiration. If these methods are not compatible due to specific site constraints, the permit allows for the use of natural, landscape-based stormwater treatment measures as alternative means of providing stormwater management. Treatment measures must be hydraulically sized to treat the runoff and are required to be regularly maintained. The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) has published the C.3 Stormwater Technical Guidance (2016) to facilitate these low-impact designs.

Provision C.6 requires construction sites to implement year-round effective erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), good site management, and non-stormwater management through all phases of construction. To facilitate compliance with the C.3 and C.6 provisions, the SMCWPPP has developed a review checklist for development projects identifying specific construction site BMPs, source controls, and low-impact development design measures.

The City of Redwood City has engineering standards that address drainage and storm drain design criteria, including provisions from the City's Code of Ordinances, Chapter 27A, Stormwater Management and Discharge Control Program.

4.10.2 Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant with Mitigation.

Construction: Construction activities, such as grading, excavation, and backfilling, have the potential to affect surface water quality. Disturbed soils temporarily exposed to the erosive forces of wind, rain, and stormwater runoff could be released to nearby drainages and storm drains. In addition, stormwater runoff could be contaminated with chemicals used during construction (such as fuels, oils, and solvents) as the result of the daily use, transportation, and storage of these materials; or from contaminants remobilized from areas of existing soil contamination at the project site. Construction of the new walkway at Lathrop Street, and extension of the sidewalk at El Camino Real and Maple Street would extend above Redwood Creek. Disposal of construction dewatering could also degrade surface water quality if dewatering of groundwater during excavations is not appropriately treated and/or disposed of. Construction activities also have the potential to impact groundwater quality if groundwater is directly exposed to construction contaminants, such as after hazardous material spills.

Because disturbed areas in the project site would be greater than 1 acre, the project would obtain coverage under the SWRCB's Construction General Permit. As part of the Construction General Permit, the contractor would prepare and implement an SWPPP that specifies BMPs to avoid and minimize the discharge of pollutants from the site throughout the construction period. Potential erosion and transportation of soil particles would be managed through standard construction BMPs, such as installation of silt fences, which would substantially reduce potential sediment transport from the construction site. Other construction-related contaminants, such as oil and grease, would be managed through appropriate material handling and good housekeeping practices at the construction site. Other BMPs that would be implemented at the site include stabilized construction entrances and storm drain inlet protection. The contractor would also be responsible for maintaining these BMPs in good and effective condition. Such measures would include, but not be limited to:

- *Minimize Active Construction Area.* The number of access routes, size of staging areas, and the size of the active construction sites would be limited to the minimum necessary to achieve project objectives; and the staging, storage, equipment laydown, access routes, and parking areas would be established on paved or previously disturbed areas to the extent feasible.
- *Implement Erosion Control.* Standard construction site erosion control measures would be used where sediment from exposed slopes could erode and enter drainage facilities. Areas of disturbed soils that slope toward drainages would be stabilized when not actively in use to reduce erosion potential. Materials used for the erosion control measures and sediment barriers would be weed-free.
- *Implement Trash Control.* Food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers (trash cans) and would be removed from the construction site on a regular basis.
- *Hazardous Spill Prevention.* Vehicles and equipment would be maintained in proper working condition to minimize potential fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Service/maintenance vehicles would carry materials to absorb leaks or spills. Servicing, refueling, and staging of construction equipment would take place only at designated areas where a spill would not flow to drainages. Equipment washing, if needed, would occur only in designated locations where water cannot flow into drainage channels. Hazardous spills would be cleaned up immediately, and contaminated soil would be properly disposed of at a licensed facility.

Proposed pedestrian and bikeway facilities construction over Redwood Creek may be subject to the issuance of permits in compliance with the Federal Clean Water Act Section 401 and Section 404, and the California Department of Fish and Game Code Section 1600 et seq. If applicable, issuance of these permits would include any necessary conditions of approval to address potential adverse hydrology and water quality

impacts during construction activity. The agencies with jurisdiction over Redwood Creek are listed above in Table 2.7, Project Approvals. The application of SWPPP requirements above, in particular erosion control BMPs, would further limit potential impacts on Redwood Creek.

There is a potential that contaminated soil and groundwater could be encountered during excavation in areas of the project site with historic contamination. As discussed in Section 4.8, Hazards and Hazardous Materials, there are areas of the project site that contain lead, arsenic, cobalt, chlordane, and petroleum hydrocarbon concentrations in soil that exceed residential screening criteria; and there is a known groundwater plume that extends beneath the project site. Dewatering operations, including those associated with groundwater drawdown or stormwater collected in excavations, could have potentially significant effects if contaminated dewatering effluent is not handled properly.

During construction, groundwater would be removed from active work areas, treated where necessary (sediments would be allowed to settle), and disposed of in accordance with SWPPP permit requirements.

Mitigation Measure HAZ-2 (detailed in Section 4.8) requires the safe handling and disposal of contaminated soil or water encountered during construction. Mitigation Measure HAZ-2 requires an SMP to be prepared and implemented prior to construction or excavation activities. The plan would specify procedures for handling, excavating, characterizing, and managing contaminated soils and dewatering effluent. Implementation of this plan would ensure that the handling and disposing of excavated soil, groundwater, and/or dewatering effluent are in accordance with federal and state hazardous waste disposal laws, and in accordance with state and local stormwater and sanitary sewer requirements. Implementation of Mitigation Measure MM HAZ-2 would reduce potential construction-related impacts to **less than significant** levels.

Operation: Because the proposed project would create or replace more than 10,000 square feet of impervious surfaces at the site, the project is required to comply with San Francisco Bay RWQCB's Municipal Regional Permit C.3 requirements. Provision C.3 of the NPDES permit governs storm drain systems and regulates post-construction stormwater runoff. This provision requires new development and redevelopment projects to incorporate Low Impact Development (LID) treatment measures and other appropriate source control and site design features to reduce the pollutant load in stormwater discharges, and to manage runoff flows. For projects that alter more than 50% of the existing impervious surfaces, stormwater treatment systems must account for stormwater runoff from the entire redevelopment project (including existing, new, and replaced impervious surfaces). In addition, certain land development projects characterized as smart growth, high-density, or transit-oriented development can qualify as "special projects," where a portion of the project area can be treated using non-LID measures. Because the project site is within a planned Priority Development Area and meets the required minimum Floor Area Ratio, the project would qualify for special category "C" (i.e., transit-oriented development). According to the "special project worksheet" developed during project design, between 55 and 75% of each parcel (depending on parcel design) could be treated with non-LID treatment measures (Talus Engineering, 2018).

Consistent with the Municipal Regional Permit's C.3 and Special Project requirements, detention of stormwater is proposed using LID flow-through treatment planters placed outside the buildings. For each parcel, a portion of the building roof would drain to the LID flow-through treatment planters, with the remainder of the site handled through non-LID media filter devices. Detention volumes in the planters would be oversized to compensate for portions of the sites that flow through media filtration devices without detention (Talus Engineering, 2018).

In summary, because the project Applicant would implement post-construction stormwater management in accordance with the aforementioned regulations, operation of the proposed project would not violate any water quality standards or waste discharge requirements and would not substantially degrade water quality. Operational impacts would therefore be **less than significant.**

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact.

Construction: Water demands during construction (for dust control, concrete mixing, etc.) would be met by existing service connections to municipal suppliers. Construction demands for water are small compared to the storage capacity of the groundwater basin, which extends over 75 square miles (DWR, 2014). Construction activities would not require new wells or substantial increases in pumping at regional municipal wells, nor would it interfere with groundwater recharge that could occur if the project were converting pervious surfaces to impervious surfaces. Because construction of the project would not substantially increase groundwater pumping or cause substantial changes in groundwater elevations, construction-related impacts to groundwater supply and groundwater management would be **less than significant**.

Operation: No groundwater extraction is directly proposed as part of ongoing project operations; and as discussed further in Section 4.18, Utilities and Service Systems, existing water utility providers have confirmed that adequate water supply is available to serve the proposed residential and commercial units in the project site. The project site is not currently a major groundwater recharge area. Following completion of construction, the project site would have slightly more impervious surfaces, compared to existing conditions. However, the proposed LID detention basins would allow for local infiltration; therefore, the project is not anticipated to substantially interfere with groundwater recharge. As a result, potential operational impacts of the project on groundwater supplies and groundwater management would be **less than significant**.

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: result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?

Less than Significant Impact.

Construction: There are no streams or rivers on the project site, and the project site is not within a 100-year flood hazard zone; therefore, construction of the proposed project would not alter the course of a stream or river and would not impede or redirect flood flows. Although Redwood Creek flows in a concrete channel on the northern boundary of Parcel A, the proposed construction activities would not impact the creek or its course. Construction of the project would involve the demolition of existing structures, grading, and excavation activities, which would temporarily alter existing drainage patterns, and would likely involve additional on-site infiltration and/or detention due to the removal of existing impervious surfaces such as buildings and hardscaping. Similar to existing conditions, project site runoff during construction would generally drain by surface flow to street gutters and into the public storm drain system. Stormwater runoff would likely be managed through temporary drainage controls such as sandbag barriers or gravel bag berms to redirect run-on away from the project site. Water used during construction, such as for dust control, would not be applied in amounts that would generate runoff from the construction site; and water applications would be suspended during storm events.

As discussed above in relation to Impact (a), because the proposed project would disturb more than 1 acre of land, it would require coverage under the NPDES Construction General Permit through the SWRCB. This would require preparation and implementation of an SWPPP, including standard construction BMPs such as installation of silt fences, which would substantially reduce potential erosion and/or siltation at the construction site. Other BMPs that would be implemented at the site include stabilized construction entrances and storm drain inlet protection. The contractor would be responsible for maintaining these BMPs in good and effective condition. With implementation of standard construction BMPs, construction of the proposed project would not involve alterations to the existing drainage pattern that would result in substantial erosion or siltation on- or offsite, or that would provide substantial additional sources of polluted runoff.

Because construction activities would increase the acreage of pervious areas at the site, and therefore increase local infiltration, the rate or amount of surface run-off volume or timing would not be substantially increased so that flooding would occur, or so that the capacity of existing stormwater drainage systems would be exceeded.

Construction-related impacts relating to alteration of drainage patterns would therefore be **less than significant**.

Operation: There are no streams or rivers on the project site, and the project site is not within a 100-year flood hazard zone; therefore, operation of the proposed project would not alter the course of a stream or river and would not impede or redirect flood flows.

Following completion of construction activities, the project site would be developed with approximately 8.33 acres of mixed-use development, including approximately 7.16 acres of building roof, 0.73 acre of pavement, and 0.43 acre of landscaped areas (see Table 4.10-2), which would alter drainage patterns at the site compared to existing conditions. However, because the majority of the project site would be paved, and the majority of landscaped areas would be composed of LID flow-through treatment planters, the proposed permanent changes to drainage patterns at the site would not cause substantial erosion on the project site.

Table 4.10-2 Proposed Impervious/Pervious Areas of Project Site

Surface Type	Parcel A (sf)	Parcel B (sf)	Parcel C (sf)	Parcel D (sf)	Parcel E (sf)	Total Project Site (acres)
Building Roof (impervious)	65,329	48,133	52,588	40,280	105,457	7.16
Pavement (impervious)	12,399	0	6,772	12,599	0	0.73
Landscape pervious area (*% total area)*	2,810 (*3.5%*)	6,159 (*11.3%*)	5,772 (*8.9%*)	2,555 (*4.6%*)	1,905 (*1.8%*)	0.43 (*5.2%*)
Total Area	80,538	54,292	65,132	55,394	107,362	8.33

sf= square feet
Sum of parts may not match total due to rounding.
Source: Talus Engineering 2018

Hydromodification, which refers to the change in timing, peak discharge, and volume of runoff caused by land development, can contribute to faster flow rates and greater runoff volumes, potentially increasing erosion in downstream, off-site areas. The project would develop the existing partially pervious areas (compacted dirt), resulting in an increase in impervious surfaces (see Tables 4.9-1 and 4.9-2, above). Due to this change and the City's higher drainage coefficient for roof areas, calculated peak flows discharging from the site are anticipated to increase compared to existing conditions; therefore, detention is required to meet C.3 permit requirements.

Consistent with the Municipal Regional Permit's C.3 and Special Project requirements, detention of stormwater is proposed using LID flow-through treatment planters placed outside the buildings. For each parcel, a portion of the building roof would drain to the LID flow-through treatment planters, with the remainder of the site handled through non-LID media filter devices. Detention volumes in the planters would be oversized to compensate for portions of the sites that flow through media filtration devices without detention (Talus Engineering, 2018). Therefore, post-development runoff from the project site would not cause increased erosion in downstream areas compared to existing conditions, and operation of the project is therefore not anticipated to substantially increase the rate or amount of surface runoff in a manner that would result in flooding.

Following detention and treatment of stormwater runoff through the LID flow-through treatment planters or media filtration devices, stormwater drainage would be collected and directed to the existing public storm drain system. A portion of Parcel E would use the existing 15-inch storm drain pipe in Chestnut Street crossing Caltrain right-of-way. The remainder of the site would drain towards the existing storm drain system in Lathrop Street, discharging to the Redwood Channel. Based on preliminary calculations, the existing 18-inch pipe in Lathrop Street is undersized for the existing 10-year storm event. To improve existing drainage and accommodate redevelopment of the project site, a larger pipe network would be needed. Any needed pipe upgrades would be constructed as part of the project and would be undertaken in accordance with City

requirements that would serve to ensure proper drainage from the project site (refer to Section 4.19, Utilities and Services). The construction impacts resulting from pipeline upgrades are assessed in this Initial Study or will be further addressed in the forthcoming EIR (e.g., Air Quality impacts).

In summary, because the project applicant would implement post-construction stormwater management in accordance with the aforementioned regulations, operational impacts related to the alteration of drainage patterns would therefore be **less than significant**.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than Significant. As noted previously under "Setting," the project site is not within a 100-year flood zone. The portion of the site to the west of Main Street is identified as having a 0.2% annual chance of flood hazard (i.e., in the 500-year flood zone); and the portion of the site to the east of Main Street is identified as "areas of minimal flood hazard" (FEMA, 2019). Similarly, the project site is not in a tsunami hazard zone (CDC, 2015), and there are no other large enclosed bodies of water near the project site that would represent a seiche hazard.

Although portions of the project site are in the predicted inundation area for failure of the Lower Emerald Lake dam (Redwood City, 2010a), the project site is at the very downstream edge of the inundation area; therefore, water levels associated with potential dam failure are anticipated to be low (County 2005).

Construction: As discussed previously under a), BMPs that would prevent release of pollutants to stormwater (would also prevent release of pollutants to flood waters in the unlikely event of inundation). Construction-related impacts would be **less than significant**.

Operation: Operation of the project would include residential and commercial uses typical of similar developments within the City. There are no proposed operational uses at the project site that would represent a greater risk of release of pollutants in the event of inundation by flood or dam waters. Operational impacts would be **less than significant**.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No impact. The RWQCB prepares and implements the San Francisco Bay Basin Plan to protect surface water quality in the San Francisco Bay. Basin Plan policies are primarily implemented through the NPDES permits. As discussed in relation to impacts a) through d) above, the project would comply with all NPDES permit requirements, including preparation and implementation of an SWPPP with BMPs to minimize impacts to water quality during construction; and inclusion of stormwater detention and treatment systems in accordance with C.3 requirements as part of project design. Therefore, the project would not conflict with or obstruct implementation of a water quality control plan.

No sustainable groundwater management plan (SGMP) is currently in effect for the San Mateo Plain groundwater basin. A groundwater basin assessment was completed in July 2018 that provided an initial evaluation of basin management options, but does not constitute an SGMP (County, 2018). Because there is no SGMP in effect, the project would not conflict with or obstruct such a plan and there would be **no impact**.

References

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4.11 Land Use and Planning

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI.	**Land Use and Planning. Would the project:**				
a)	Physically divide an established community?	☐	☐	☒	☐
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

4.11.1 Setting

The project site is designated as MUC-C (Mixed-Use Corridor) and MU-LW (Mixed Use – Live/Work) per the Redwood City General Plan (City of Redwood City, 2010). The intent of the Mixed-Use Corridor designation is to provide access to a mix of uses and services, including transportation options; and provide higher-density residential and commercial development. The goal of the Mixed-Use Live/Work designation is to provide a mix of residential and commercial uses in the same building area.

The project site is zoned as MUC-ECR (Mixed Use Corridor – El Camino Real) and MULW (Mixed-Use – Live/Work) per the Redwood City Zoning Ordinance. These uses allow for a mix of live/work, and other uses such as residential, office, retail, and light industrial, to be designed in a pedestrian-oriented manner per the Redwood City El Camino Real Corridor Plan (Redwood City, 2017).

4.11.2 Discussion

a) Physically divide an established community?

Less Than Significant Impact. The project site is zoned as MUC-ECR (Mixed-Use Corridor – El Camino Real) and MULW (Mixed-Use – Live/Work). As discussed in Chapter 2, Project Description, the project site is in a transit-rich area adjacent to commercial and residential uses. The proposed project would not introduce physical features that would create a barrier, divide, or separate adjacent uses; or impede movement or circulation through the neighborhood.

The proposed site design would improve access to bicyclists and pedestrians through and in the vicinity of the project site by developing a landscaped walkway between El Camino Real and Lathrop Street on Parcel A, along the southern side of Redwood Creek. This would create a connection between Downtown and the neighborhoods west of El Camino. Lathrop Street would become a pedestrian-oriented walkable street to encourage pedestrian and bicycle circulation between El Camino Real and Main Street. The proposed project would remove existing vehicular access on Shasta Street between Main Street and Chestnut Street to expand the existing traffic median; however, this would not impede access to existing neighborhoods adjacent to the project site and would provide an additional pedestrian linkage from Main Street to Chestnut Street parallel to the Caltrain railway.

The proposed project anticipates closing the following streets during project construction:

- Close Beech Street from El Camino Real to Main Street
- Close Lathrop Street from Elm Street to Cedar Street
- Close Shasta Street from Main Street to Chestnut Street

- All internal streets would be closed to pedestrian, bicycle and vehicular traffic.

The above-mentioned street closures would be short-term, occurring during project construction, and would reopen when construction activities have completed. The street closures would not permanently impede access to existing areas adjacent to the project site; and local roadways adjacent to the project site, including Main Street, Chestnut Street, and El Camino Real, would remain open. Therefore, there would be a **less-than-significant impact** associated with physical division of an established community due to construction or operation of the proposed project.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. The proposed project includes development of a 7-story residential building, three 3-story office buildings, and one 4-story office building. The proposed project would provide residential, office, retail, and child care uses that would be consistent with the project site's land use designations and the existing surrounding area uses. As outlined in Section 2.0, Project Description, project approval is subject to a variety of permits. With approval of the permit applications, the project would be consistent with the Redwood City General Plan, El Camino Real Corridor Plan, and Zoning Ordinances.

General Plan. A detailed analysis of the project's consistency with applicable policies of the Redwood City General Plan is provided in Table 4.11-1 to identify whether the project would create an inconsistency with the General Plan (as required by Section 15125(d) of the CEQA Guidelines). The analysis in Table 4.11-1 demonstrates that the project would not create inconsistencies with the applicable policies of General Plan.

Table 4.11-1 General Plan Consistency Analysis

Policy	Consistency Analysis
BE-1.4: Require that buildings and properties be designed to ensure compatibility within and provide interfaces between neighborhoods, corridors, and centers.	**Consistent**. The mixed-use nature of the project and its site plan would be compatible with the surrounding commercial and residential units. As outlined in Sections 2.5.4 and 2.5.7, the project would improve connectivity with the City's downtown and would allow the City to implement bike path connections.
BE-1.5: Require that new and renovated buildings be designed to avoid styles, colors, and materials that negatively impact the environment or the design character of the neighborhood, corridor, and center in which they are located.	**Consistent.** As outlined in Section 2.5.6, the architectural style of the proposed buildings is intended to be contemporary, modern, and context-sensitive to the surrounding area, which features residential buildings with a neutral color palette. The proposed building façades do not include architectural shapes or massing that would result in adverse aesthetic impacts. Furthermore, proposed landscaping and trees would visually "soften" the comparative newness and prominence of the proposed buildings compared to lower-scaled development on surrounding parcels.
BE-1.6: Require that new large-scale projects are developed with an interconnected pattern of small blocks to induce walking and create walkable neighborhoods and to maximize connections between neighborhoods. If a new large-scale development project is able to achieve circulation interconnectedness for all modes and maximize walkability, then the small block pattern may not be required.	**Consistent.** . As outlined in Sections 2.5.4 and 2.5.7, the project would improve connectivity with the City's downtown. The project would include several pathways and plazas that would allow pedestrian travel through the project site and enhance connectivity between the site's different land uses. The project would also include bicycle paths that would allow for multimodal connectivity.

Policy	Consistency Analysis
BE-1.7: Require that new large-scale projects consist of buildings primarily oriented to public streets, rather than private drives, walkways, and parking lots.	**Consistent.** As discussed in Section 2.5.6, the project is designed to maximize connectivity to public streets by including plaza entries, open space accessible to the public, and street level commercial uses, thereby further activating public space. The use of subterranean parking throughout the project site would further de-emphasize the visual prominence of parking.
BE-1.8: Require that new projects are integrated as seamlessly as possible into surrounding development, creating extensions of the urban fabric.	**Consistent.** See discussion of Policy BE-1.4. The project would represent an extension of the urban fabric found to the west in Downtown Redwood City and in the surrounding area. The project would provide a transition between residential uses in the Downtown Core and commercial uses along Lathrop Street and El Camino Real.
BE-2.1: Create complete neighborhoods by integrating schools, parks, childcare centers, community centers, infrastructure, green spaces and parks, and other public amenities into each neighborhood.	**Consistent**. The project would feature a child care facility and numerous outdoor spaces and amenities. The project would also feature a family-oriented entertainment space.
BE-2.5: Protect neighborhoods from the encroachment of incompatible activities or land uses that may have a negative impact on the residential living environment.	**Consistent.** The portion of the project closest to existing residential uses (along Maple Street and El Camino Real) is proposed to also feature residential uses. The General Plan also states that office uses such as those included in the project are compatible in proximity to residential uses.
BE-2.7: Effectively integrate single-unit and multi-unit housing with local-serving convenience and neighborhood shopping centers, parks and recreation opportunities, childcare, and other uses appropriate for neighborhoods.	**Consistent.** The project contains a mix of land uses, including multi-family residential, office, retail, and child care uses as described in Section 2.5.
BE-11.1: Improve the corridors to create a network of “complete streets” that emphasize pedestrian orientation and safety, public transit access, safe bicycle movement, and other improvements.	**Consistent.** The project’s outward orientation to the existing street network is consistent with pedestrian-oriented, walkable neighborhood design. The project would also include bicycle paths that would better connect the project area with the Downtown Core.
BE-11.3: Plan for and accommodate mixed-use projects along corridors, where a site or sites are developed in an integrated, compatible, and comprehensively planned manner involving two or more land uses. Combine residential and office uses with commercial development to reduce automobile trips and encourage walking, and facilitate compact, sustainable development.	**Consistent.** The project is a mixed-use project that includes residential, commercial, and office uses to encourage walking and sustainable development.
BE-11.7: Provide the appropriate density and intensity of land uses to facilitate high levels of transit use along corridors.	**Consistent.** The project includes 291 multi-family housing units and 550,143 square feet of office space located along an existing bus route and 0.5 mile from the Redwood City Transit Center.
BE-12.1: Integrate land use and transportation planning and development to transform El Camino Real to an urban, pedestrian-friendly, and transit-oriented boulevard for residents to live, work, shop and play.	**Consistent.** The project contains a mix of land uses, including multi-family residential, office, retail, and child care uses as described in Section 2.5. The project would help transform El Camino Real by including street-facing commercial uses along El Camino Real and residential uses within walkable areas.

Policy	Consistency Analysis
BE-12.2: Encourage the replacement of older low-scale, auto-oriented development with well-designed new projects that offer pedestrian orientation, higher densities with more efficient use of land, and continued productive economic value.	**Consistent.** The project would replace the existing auto-oriented uses, including a car dealership and car repair shops with expansive parking and paved areas. The project would better use the existing project area and continue to provide economic value.
BE-12.3: Accommodate the pedestrian in all public and private improvement projects along El Camino Real.	**Consistent.** The project is a mixed-use project that is pedestrian oriented.
BE-12.4: Enhance the visual character of the El Camino Real Corridor by public streetscape improvements, including landscaping, coordinated street furniture and fixtures, and upgraded infrastructure.	**Consistent.** The project is a mixed-use project that is pedestrian oriented. The project would include extensive landscaping along El Camino Real, as well as pedestrian-serving commercial uses.
BE-12.5: Provide vibrant public spaces and gathering places along the El Camino Real Corridor.	**Consistent.** The project is a mixed-use project that is pedestrian oriented, including street activating uses along El Camino Real. It would also provide public open space and facilitate the improvements for a community garden on a nearby parcel outside of the project scope. The project would also include an indoor/outdoor active eating/drinking use on Parcel E.
BE-17.1: Accommodate outdoor cafes and similar neighborhood-serving uses in the public right-of-way as a means of promoting pedestrian activity and center vitality. Ensure that access and noise considerations relative to surrounding uses are sufficiently addressed.	**Consistent.** The project would include outdoor areas and neighborhood serving uses, including a potential eating and drinking establishment on Parcel E.
BE-17.3: Encourage and facilitate the establishment of child-care facilities in proximity to large employment areas such as Downtown, south Broadway, Redwood Shores, the Kaiser and Sequoia Hospital areas, and near high-density residential areas and transit nodes.	**Consistent.** The project would include a child care facility in proximity to the Redwood City Transit Center.
BE-17.4: Facilitate a new Redwood Creek/Harbor Center that embraces Redwood Creek and the Bay, fostering an exciting waterfront destination and neighborhood with a mix of uses.	**Consistent.** As outlined in Section 2.5.4, the project would include constructing the community garden on an adjacent parcel and a new multipurpose trail along Redwood Creek, thereby activating the area.
BE-20.3: Provide for enhanced connections from the Gateway Centers to Downtown and other Employment Centers to create opportunities for synergy among businesses.	**Consistent**. The project site is near the City's Downtown. Implementation of the project would replace auto-oriented uses and surface parking with a high-density mixed-use project. The project would help connect the Downtown Core with other parts of Redwood City.
BE-22.1: Strive for consistency between the General Plan and the Zoning Code and other local regulatory documents that implement General Plan policies.	**Consistent.** The project would not require a General Plan amendment or a zone change, because it is consistent with applicable land use and zoning designations. The project would apply for State Density Bonuses; however, this is not inconsistent with the City's land use regulations.
BE-23.1: Accommodate a range of land uses to meet the economic, environmental, and social needs of Redwood City.	**Consistent.** The project contains a mix of land uses, including multi-family residential, office, retail, and child care uses.

Policy	Consistency Analysis
BE-23.6: Accommodate mixed-use projects pursuant to the Land Use Map and any implementing regulations.	**Consistent.** See discussion of Policy BE-23.1.
BE-23.7: Promote higher residential densities at locations near or within commercial, financial, and compatible employment centers, and also transportation corridors where neighborhood services are available.	**Consistent.** See discussion of Policies BE-20.3 and BE-23.1.
NR-7.2: Encourage the use of site and landscape designs that minimize surface runoff and retain or detain stormwater runoff, minimizing volume and pollutant concentrations	**Consistent:** The project site is almost entirely covered with impervious surfaces (buildings and paved surface parking) under existing conditions. As discussed in Section 2.5, the project would include expanses of landscaping that would allow increased opportunities for groundwater recharge. Furthermore, new green infrastructure, including bio-filtration swales, would be constructed to capture and treat stormwater before entering the City's storm drain system. For more analysis regarding this topic, see Section 4.8, Hydrology and Water Quality, of this Initial Study.

Source: City of Redwood City, 2010, Redwood City General Plan.

Plan Bay Area. The project is consistent with the overall regional policy framework of Plan Bay Area because it would produce housing (while relocating and replacing existing housing or residents); redevelop an existing underused site within an urban footprint (instead of developing on the region's undeveloped periphery); and locate jobs near housing and transit. In particular, the project site is in El Camino Real Corridor and approximately 0.5 mile from the Redwood City Transit Center. Therefore, there would be a **less-than-significant impact** associated with conflicts with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect that would occur as a result of construction or operation of the proposed project.

References:

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4.12 Mineral Resources

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

4.12.1 Setting

The Redwood City General Plan does not designate any areas of significant mineral resources (Redwood City, 2010). The project site is not in or near an area where mineral deposits are mined. In addition, according to the USGS Mineral Resources On-Line Spatial Data, the project site is not in close proximity to or on a known mineral resource (USGS, 2019).

4.12.2 Discussion

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The discussion below applies to both significance thresholds (a) and (b) as outlined above.

As described above, the project site is not in an area known to contain significant mineral resources. Therefore, the project would not result in the loss of availability of a known mineral resource of value to the region or state, nor would it 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. The project site does not lie in an area designated as a locally important mineral resource recovery site. Therefore, there would be **no impact**.

References:

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4.13 Noise

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.	**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?	☐	☒	☐	☐
	b) Generation of excessive vibration or groundborne noise levels?	☐	☒	☐	☐
	c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.13.1 Setting

Sound Fundamentals

Sound is the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium, such as air. Noise generally is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in the extreme, hearing impairment. Noise effects can be caused by pitch or loudness. *Pitch* is the number of complete vibrations or cycles per second of a wave that result in the range of tone from high to low; higher-pitched sounds are louder to humans than lower-pitched sounds. *Loudness* is the intensity or amplitude of sound. The *sound pressure level* is the descriptor most commonly used to characterize the loudness of a sound level. Because sound pressure can vary enormously within the range of human hearing, the logarithmic *decibel* scale (dB) is used to quantify sound levels.

The human ear is not equally sensitive to all frequencies within the audible sound spectrum, so sound pressure level measurements can be weighted to better represent frequency-based sensitivity of average healthy human hearing. One such specific “filtering” of sound is called *A-weighting*. Because humans are less sensitive to low-frequency sound than they are to high-frequency sound, dBA levels deemphasize low-frequency sound energy. A logarithmic scale is used to quantify sound intensity that approximates the range of sensitivity of the human ear that normally extends from 0 dBA to about 140 dBA. A 10-dBA increase in the level of continuous noise represents a perceived doubling of loudness. With respect to traffic noise, increases of 3 dBA are barely perceptible to people, while a 5-dBA increase is readily noticeable.

Different descriptors for sound-level measurements are used to characterize the time-varying nature of sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that noise effects are

dependent on the total acoustical energy content and the time and duration of occurrence. Table 4.13-1 briefly defines these measurement descriptors and other acoustical terminology used in this section.

Table 4.13-1 Acoustical Terminology

Term	Definition
Sound	A vibratory disturbance created by a vibrating object that (when transmitted by pressure waves through a medium, such as air) can be detected by a receiving mechanism, such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Ambient noise	The composite of noise from all sources near and far in a given environment.
Decibel (dB)	A unit-less measure of sound on a logarithmic scale, which represents the squared ratio of sound-pressure amplitude to a reference sound pressure. The reference pressure is 20 micropascals, representing the threshold of human hearing (0 dB).
A-weighted decibel (dBA)	An overall frequency-weighted sound level that approximates the frequency response of the human ear.
Equivalent noise level (L_{eq})	The average sound energy occurring over a specified time period. In effect, L_{eq} is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period.
Maximum and minimum noise levels (L_{max} and L_{min})	The maximum or minimum instantaneous sound level measured during a measurement period.
Day-night level (L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m. (nighttime).
Community noise equivalent level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring between 7 p.m. and 10 p.m. and 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m.

Source: Data compiled by AECOM in 2016.

Table 4.13-2 shows examples of various sound levels in numerous outdoor and indoor environments, with the descriptions placed corresponding to their typical sound levels along a vertical scale of increasing dBA.

Table 4.13-2 Typical Sound Levels

Common Outdoor Activities	Noise Levels, dBA	Common Indoor Activities
Jet fly-over at 1,000 feet	110	Rock band
Gas lawn mower at 3 feet	100	
Diesel truck at 50 feet at 50 miles per hour	90	Food blender at 3 feet
	80	Garbage disposal at 3 feet
Gas lawn mower at 100 feet	70	Vacuum cleaner at 10 feet
Heavy traffic at 300 feet	60	Normal speech at 3 feet
Quiet urban area, daytime	50	Dishwasher in the next room
Quiet urban area, nighttime	40	Theater, large conference room (background)
Quiet suburban area, nighttime	30	Library
Quiet rural area, nighttime	20	Bedroom at night, concert hall (background)
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: California Department of Transportation, Technical Noise Supplement, 2013, http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf, accessed January 25, 2018.

In a typical environment, the *day-night noise level* ($L_{dn)}$ and *community noise equivalent level* (CNEL) noise descriptors rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent, and they are treated as such in this section.

Attenuation of Noise

Sound typically attenuates from stationary point sources at a rate of 6 dB per doubling of distance (e.g., 6 dB at 50 feet, 12 dB at 100 feet, 18 dB at 200 feet). For line sources such as free-flowing traffic on freeways, sound attenuates at approximately 3 dB per doubling of distance (e.g., 3 dB at 50 feet, 6 dB at 100 feet, 9 dB at 200 feet). For example, noise from a parking lot, that registers 66 dBA at 50 feet would register 60 dBA at 100 feet and 54 dBA at 200 feet from the source, and so on. Noise emanating from a linear source, such as traffic along a highway attenuates at 3 dBA per doubling of distance rather than 6 dBA (for a point source). These rules are applied in below to estimate sound levels at the nest based on the type and level of sound noise at the source and the distance between the sound source and nest.

Atmospheric conditions (such as wind, temperature gradients, and humidity) can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound traveling over an acoustically absorptive surface (such as grass) attenuates at a greater rate than sound traveling over a hard surface (such as pavement). The increased attenuation caused by acoustical air and ground absorption typically is in the range of 1–2 dB per doubling of distance. Barriers that block the line of sight between a source and receiver, such as buildings and topography, also increase the attenuation of sound over distance.

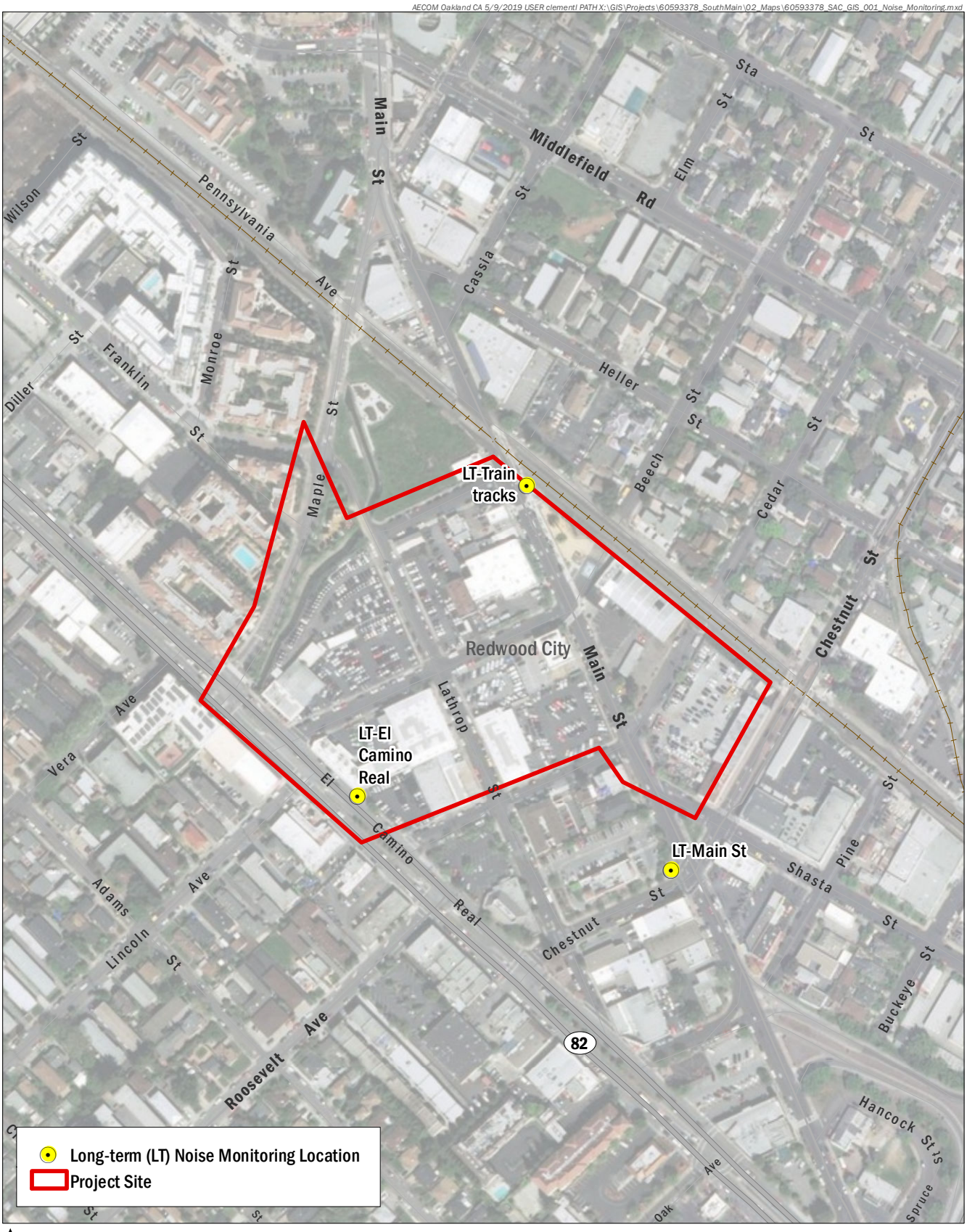
Existing Noise Environment

The major noise source affecting the project site is vehicular traffic along El Camino Real to the south, and train noise on the Caltrain corridor to the north. Reoccurring noise levels of 109 decibels (dB) from train horns were measured at the project site location closest to the tracks (Salter Associates, 2018). According to noise measurements taken by Charles M. Slater Associates on July 30 and August 4, 2018, the noise environment in the project area is approximately 77 to 78 dBA L_{eq} near the Caltrain tracks, adjacent to Parcel E. Adjacent to El Camino Real, ambient noise levels were registered at 71 to 72 dBA L_{eq}; adjacent to Main Street, ambient noise levels were registered at 65 to 71 dBA L_{eq}; and along Maple Street to west of Parcel A, ambient noise levels were registered at 67 dBA L_{eq} (Salter Associates, 2018). Noise monitoring locations are shown in Figure 4.13-1.

The City's General Plan EIR establishes existing and future traffic noise levels along El Camino Real. Based on the City's General Plan buildout, it is anticipated that Project 2030 traffic noise levels would increase by 1dB along El Camino Real between Whipple Avenue and the City Limits (Redwood City, 2010). In the project site, the existing traffic noise levels vary between 60 to 65 A-weighted sound levels (dBA), and surrounding the project site, the existing traffic noise levels reach up to 75 dB depending on the distance from El Camino Real and other roadways (Redwood City, 2010).

Applicable Noise Regulations

The Redwood City General Plan Safety Element (adopted in 2011) outlines acceptable exterior and interior noise standards for varying land uses. The Redwood City Noise Guidelines for Land Use Planning establish the normally acceptable range for Mixed-Use Districts as up to 60 dBA CNEL; the conditionally acceptable range is 60 to 75 dBA CNEL; the normally unacceptable range is 75 to 80 dBA CNEL; and the clearly unacceptable range is 80 dBA CNEL and above. The noise limit is a maximum interior noise level of 45 dBA Ldn/CNEL. Generally, interior noise levels for standard residential units are approximately 15 decibels lower than exterior noise levels with the windows partially open.



NOISE MONITORING LOCATIONS

South Main Mixed-Use Development Project
City of Redwood City, California

FIGURE 4.13-1

Chapter 24 of the Redwood City Municipal Code[9] sets allowable noise limits for construction activities. Section 24.31 prohibits noise levels from exceeding 110 dBA for any item of machinery, equipment, or device used during construction in a residential district. Section 24.32 prohibits construction activities, including demolition, alteration, repair, or remodeling of or to existing structures; and the construction of new structures on the property in a residential district or within 500 feet of a residential district between 8:00 p.m. and 7:00 a.m. Monday through Friday; and at any time on Saturdays, Sundays, and Holidays, if the noise level generated exceeds the local ambient measured within the residential district. Section 24.34 allows for exceptions to construction noise hours if the applicant can show proof that noise abatement techniques indicate that compliance with Section 24.32 is not practicable. The City has in place a permit mechanism for allowing exceptions when warranted.

Existing Vibration Environment

The existing vibration environment, similar to the noise environment, is dominated by transportation-related vibration from roadways and the Caltrain rail in the vicinity of the project site. Heavy truck traffic can generate groundborne vibration, which varies considerably depending on vehicle type, weight, and pavement conditions. However, groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the road right-of-way. The primary source of existing groundborne vibration in the vicinity of the project site would be the railroad line (Caltrain rail) located just east of the project site. The closest buildings at the project site would be approximately 50 feet (Parcel E) from the existing rail tracks. The closest existing vibration-sensitive use to the project site would be the existing office at the corner of Elm and Main, which would be located approximately 40 from the rail tracks and from the project site in Parcel D. Based on FTA data, heavy rail vehicles operating at 50 miles per hour (mph) would generate groundborne vibration of approximately 0.07 PPV (85 VdB) at a distance of 50 feet from the track's centerline (FTA 2018, Figure 6-4 [reproduced below as Figure 4.13-2]).

Applicable Vibration Regulations

Section 54.8 of the Redwood City Zoning Ordinance establishes that for residential buildings within 100 feet of the centerline of railroad tracks, a site-specific vibration study is required.

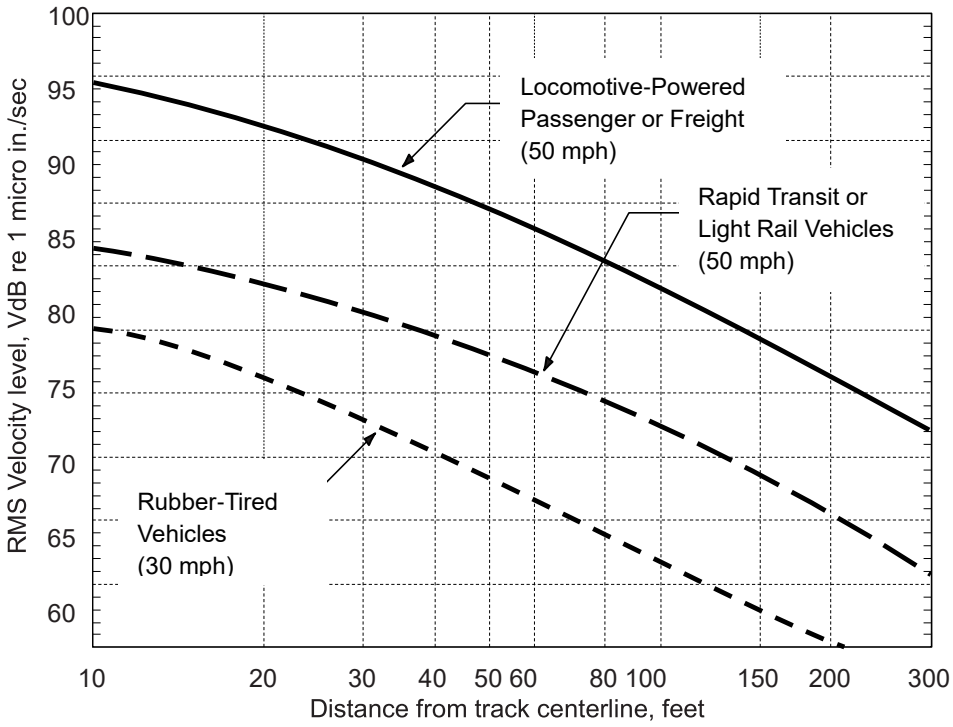
Sensitive Receptors

Noise-sensitive land uses generally consist of those uses where exposure to noise would result in adverse effects and uses for which quiet is an essential element of the intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other noise-sensitive uses include hospitals, convalescent facilities, hotels, churches, libraries, and other uses where low noise levels are essential.

The closest exterior noise-sensitive uses to the project site are the residential area west of Caltrain Line, approximately 100 feet east of Parcel E, and a swimming pool in the residential area along Maple Street approximately 150 feet to the north from Parcel A. The nearest interior noise sensitive use to the project site would be the existing office at the corner of Elm and Main approximately 40 feet from Parcel D. Commercial and residential uses are also located west approximately 100 feet from Parcels A and B, west of El Camino Real.

The Main Street Dog Agility Park is to the north of Parcel E, adjacent to the train tracks and Maple Street, and Jardin de Ninos Park, about 0.3 mile to the east. Redwood Creek, which is channelized in the project area, borders Parcel A to the northwest. Wings Learning Center at 1201 Main Street is approximately 150 feet to the north of the project site; and Hoover Elementary School and North Star Academy are both less than 0.5 mile away.

[9] https://library.municode.com/ca/redwood_city/codes/code_of_ordinances?nodeId=CH24NORE



Source: FTA 2018, adapted by AECOM in 2019

Figure 4.13-2 Generalized Ground-Surface Vibration Curves

4.13.2 Discussion

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?

Less than Significant Impact with Mitigation. The proposed project would generate construction noise from equipment operating on the project site, and from the transport of construction equipment, materials and workers to and from the site. The proposed project would also generate permanent operation noise from HVAC and other maintenance activities on the project site, and traffic noise from the daily commutes of the future occupants.

Construction. The unmitigated noise level produced by the combinations of equipment for the proposed project would be approximately 85 dBA[10] at 50 feet. The noise calculations in support of this analysis are provided in Appendix NOI. Assuming standard spherical spreading loss (-6 dB per doubling of distance), the project construction noise levels were estimated to be 75 to 87 dBA Leq, at the nearest noise-sensitive uses, as shown in Table 4.13-3. These levels of construction noise would not exceed the threshold of 110 dBA of the Municipal Code 24.31, which prohibits noise levels from exceeding 110 dBA for any item of machinery equipment. Also, construction noise would be short-term and temporary, and operation of heavy-duty construction equipment would be intermittent

[10] See Appendix NOI for project-related construction noise levels.

throughout the day during construction. No permanent increase in ambient noise levels would result, as operation activities associated with the proposed project would create negligible noise.

Table 4.13-3 Construction Equipment Noise Levels (dB, Leq) at the Nearest Noise-Sensitive Uses in the Project Area

Receiver Location	Shortest Distance (ft) Between Noise-Sensitive Uses and Proposed Construction Areas	Noise Level, dB L_{eq}			
		Exterior		Interior	
		Ambient Noise	Project Construction Noise	Project Noise, Doors/Windows Open[1]	Project Noise, Doors/Windows Closed[2]
Residential area, north of Project site (Parcel E) to the north of Caltrain Line.	100	77-78	79	64	54
Residential development south of Parcel C at the corner of Cedar Street and Lathrop Street	50	71	85	70	60
Office at the corner of Elm and Main, east of the project site (Parcel D)	40	77-78	87	72	62
Pool in residential area, north of Project site (Parcel A) along Maple Street.	150	67	75	60	50
Commercial and Residential area along El Camino Real, west of the Project site (Parcels A&B)	100	71-72	79	64	54

Notes: dB = decibels; L_{eq} = equivalent sound level (the sound energy averaged over a continuous 15-minute to 1-hour period).

[1] 15 dB reduction for doors/windows open (EPA, 1974)

[2] 25 dB reduction for doors/windows closed (EPA, 1974)

Source: Data compiled by AECOM in 2019

The General Plan would require the implementation of noise control measures that could ensure acceptable indoor and outdoor noise levels and avoid, minimize, or reduce potential impacts to noise sensitive land uses, as detailed in Policies PS-13.1 through PS-13.5, PS-13.9, PS-13.10, PS-14.1, PS-14.4, PS-14.5, and PS-14.6 of the General Plan.

Section 24.32 of the City's Municipal Code prohibits construction activities, including demolition, alteration, repair, or remodeling of or to existing structures; and the construction of new structures on property in a residential district or within five 500 hundred feet (500′) of a residential district between 8:00 p.m. and 7:00 a.m. Monday through Friday; and at any time on Saturdays, Sundays, and Holidays, if the noise level generated exceeds the local ambient measured within the residential district. However, the proposed project would have construction activities, like massive concrete pours and sensitive utility relocation efforts that would require continuous work and beyond the permitted hours. Because some construction activities would take care at night, construction activities could result in a substantial increase in ambient noise levels in the vicinity of the project site during nighttime construction. As outlined above, Section 24.34 of the City's Municipal Code allows for exceptions for nighttime and weekend work on a case-by-case basis after a thorough investigation of available noise abatement techniques. While project construction would not exceed the City criterion of 110 dBA Lmax, given that the overall multi-year duration of project construction, proximity of nearby

sensitive receptors, and the potential for nighttime work the project would result in a potentially significant impact. As such, Mitigation Measure NOI-1 shall be required.

Mitigation Measure NOI-1: Noise Abatement

The project sponsor shall incorporate the following practices into the construction contract agreement documents to be implemented by the construction contractor during the entire construction phase of the project:

- The project sponsor and contractors shall prepare a Construction Noise Control Plan. The details of the Construction Noise Control Plan shall be included as part of the permit application drawing set and as part of the construction drawing set.
- Limit construction to the hours allowed by the City (7:00 a.m. to 8:00 p.m.) and prohibit construction on Sundays and holidays.
- At least 21 days prior to the start of construction activities, all off-site businesses and residents within 300' of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint.
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City.
- During the entire active construction period, equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.
- Require the contractor to use impact tools (e.g., jack hammers and hoe rams) that are hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
- Include noise control requirements for equipment and tools, including concrete saws to the maximum extent feasible. Such requirements could include but are not limited to performing work in a manner that minimizes noise; and undertaking the noisiest activities during times of least disturbance to nearby sensitive receptors.
- During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, or insulation barriers or other measures shall be incorporated to the extent feasible.
- During the entire active construction period, noisy operations shall be combined so that they occur in the same time period as the total noise level produced would not be significantly greater than the level produced if the operations were performed separately (and the noise would be of shorter duration).
- Select haul routes that avoid the greatest amount of sensitive use areas.

- Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes. The sign shall be designed in accordance with the Redwood City Municipal Code Chapter 24.33.
- During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.
- For any construction work outside permitted hours, the applicant shall apply for a permit as outlined under the Redwood City Municipal Code Section 24.34. The applicant and construction contractor shall follow any additional noise abatement measures outlined in the permit, if granted. Prior to issuance of the permit, the applicant shall provide documentation prepared by a qualified noise consultant demonstrating that the construction activity will not result in an exceedance of the acceptable interior noise levels established by the City for residential districts (45 dBA interior). Any permitted nighttime construction activities shall be subject to monitoring to ensure that the acceptable noise levels prescribed by the permit are being maintained. A number of feasible methods exist to reduce nighttime construction noise, and could include a combination of the following or others as identified by the qualified noise consultant:
  - Enclose stationary noise sources, such as pumps, compressors, and generators in shipping containers or other types of enclosures that are solid and block the line of sight between the construction equipment and sensitive receptors.
  - Locate noise-attenuating buffers such as structures, truck trailers, or spoil piles between noise sources and sensitive receptors to block the line of sight between the construction equipment and sensitive receptors.
  - Limit the operation of construction equipment to the minimum necessary to accomplish the planned work activities.
  - Maximize the distance between nighttime construction activities and nearby residential uses.
  - In the event that thresholds are exceeded, the contractor will provide information to the City within 48 hours of the exceedance, identifying the source of the exceedance and corrective actions to reduce the noise.
  - If noise complaints are received due to nighttime construction noise, the City and the contractor will meet to discuss other options that can further reduce noise levels at the sensitive receptor. One option may be acoustic barriers (e.g., lead curtains or sound barriers) that could be installed on the receptor's property, which can reduce construction noise levels by approximately 5 dBA.

The mitigation measure would reduce potential impacts by including noise abatement measures, notification procedures and requirements to minimize idling and equipment use. In addition, nighttime noise impacts would be addressed by implementing noise reduction measures that demonstrably attain acceptable interior noise standards. As such, with implementation of Mitigation Measure NOI-1 project impacts from construction noise would be **less than significant**.

Proposed project construction would result in additional vehicle trips on the local roadway network as workers (up to 45 per day) commute and equipment and materials are transported (up

to 50 trucks per day). Project-related construction traffic noise levels were estimated using the Federal Highway Administration's Roadway Noise Model. Noise-sensitive land uses including residential properties are located within 50 feet from the centerline of the routes anticipated for hauling materials to and from the project site. The unmitigated noise level produced by the construction traffic under the peak construction period for the proposed project would be approximately 66 dBA[11] at the nearest noise-sensitive uses. As discussed above, within and surrounding the project site, the existing traffic noise levels reach up to 75 dB depending on the distance from El Camino Real and other roadways (Redwood City, 2010). Therefore, project construction traffic noise would exceed the City's acceptable threshold of 60 dBA. However, the project construction traffic noise would not exceed the existing traffic noise in the area. The noise environment in the project area currently exceed the City's noise level goal for exterior noise in residential areas (65 dBA CNEL) as a result of existing vehicular traffic noise sources. Also, construction noise would be short-term and temporary, and operation of heavy-duty construction equipment would be intermittent throughout the day during construction. The project would have a **less than significant** impact due to construction traffic.

Operation. The proposed project would also generate permanent operational noise from HVAC and other maintenance activities on the project site, as well as traffic noise from future project site users, both commercial and residential. The project is located in an area where HVAC systems are in use. Therefore, operational noise associated with HVAC systems would be similar to the surrounding ambient noise levels. Additionally, all systems would be shielded in accordance with City regulations regarding the placement of HVAC systems, as outlined in Article 55, Section 55.5 F (2).

The project would generate traffic noise from both future residents, as well as employees and users of the proposed commercial space. The existing peak hour traffic volumes at the site were estimated to be 160 vehicles and 234 vehicles during the AM and PM peak hours, respectively. Project-related traffic volumes at the project site would be 790 vehicles during the AM peak hour and 769 vehicles during the PM peak hour. Therefore, the proposed project would cause the traffic volumes to increase by 630 vehicles and 535 vehicles during the AM and PM peak hours, respectively (Fehr & Peers, 2019).

These approximately 630 vehicles during the AM and 535 vehicles during PM peak hours would be distributed to all access points to the project, and as such to various roadway segments surrounding the project site. El Camino Real would act as the main access point to the project site and is the main source of mobile noise in the project vicinity. Because the estimated increase in traffic volume increases due to the project would be substantially less than the existing traffic volume along the existing roadways surrounding the project site, no substantial increase is noise levels would result. For example, according to the City's Downtown Precise Plan EIR traffic levels at El Camino Real and Jefferson Avenue were approximately 1,216 AM/1,274 PM. Typically, when the traffic volume doubles on a roadway segment compared to existing conditions, the resultant increase in traffic noise is approximately 3 dB (Caltrans 2013). The absolute number of additional project traffic trips would be less than double these existing volumes, and the number of trips specifically distributed to El Camino Real even less. Because the project would have no potential to double traffic volumes on existing roadways, the project's operational traffic noise increase would be less than 3 dB. Therefore, the impacts due to project-related operational vehicular traffic would be **less than significant**.

[11] See Appendix NOI for project-related construction noise levels.

b) Generation of excessive vibration or groundborne noise levels?

Less than Significant with Mitigation. The proposed project would generate construction vibration from equipment operating on the project site, and from the transport of construction equipment, materials and workers to and from the site. Pile-driving, and blasting, which cause excessive ground vibration, are not anticipated to be used for project construction or demolition. Project-related vibration was evaluated with respect to human perception and annoyance and with respect to building damage, from project construction and operation.

With respect to human perception, according to FTA guidelines, vibration levels of 65 to 80 VdB (depending on the frequency of the vibration events)[12] would be considered as the threshold for human annoyance for residences and buildings where people normally sleep (FTA 2018). These guidelines recommend 65 VdB for land uses where low ambient vibration is essential for interior operations (e.g., hospitals, high-tech manufacturing, laboratory facilities), and 80 VdB for residential uses and buildings where people normally sleep. Project construction–related vibration would result from the use of heavy earth-moving equipment for area clearing, temporary roadway grading, excavation, and embankment improvement.

These activities would produce a vibration level of approximately 87 vibration decibels (VdB) (0.089 inches per second PPV[13]) at a distance of 25 feet, which is the reference vibration level for operation of a large bulldozer (FTA 2018). The distance between proposed construction activities and the closest acoustically sensitive uses would be approximately 40 feet (the existing office at the corner of Elm and Main) to 100 feet (buildings to the west of Parcel A and to the north and south of Parcel E). Assuming a standard reduction of 9 VdB per doubling of distance (FTA, 2018), the project-related construction vibration level at the nearest receivers would be approximately 68 to 81 VdB, as shown in Table 4.13-4. This level of vibration is above the established thresholds of significance and would likely be perceptible. Therefore, this impact would be **potentially significant**. Mitigation Measure MM NOI-2 shall be required to lessen potential impacts from vibration during project construction.

Table 4.13-4 Construction Equipment Vibration Levels (VdB, PPV) at the Nearest Noise-Sensitive Uses in the Project Area

Receiver Location	Shortest Distance (ft) Between Noise-Sensitive Uses and Proposed Construction Areas	Project, Vibration Levels	
		PPV	VdB
Residential Area, north of Project site (Parcel E) and to the west of Caltrain Line.	40	0.044	81
Existing buildings to the south of Parcels C and E	50	0.31	78
Office at the corner of Elm and Main, northwest of the project site (Parcel D)	100	0.011	68

Notes: PPV = peak particle velocity; VdB = vibration decibels.

Source: Data compiled by AECOM in 2019

[12] 65 VdB for frequent events or More than 70 events per day, 75 VdB for occasional events or 30–70 events per day; and 80 VdB for Infrequent Events or Fewer than 30 events per day.

[13] Construction vibration is assessed in terms of Peak Particle Velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak of the vibration signal. Ground-borne vibration related to human annoyance is generally related to root mean square velocity levels expressed in VdB.

Mitigation Measure NOI-2: Prepare and Implement a Vibration Control Plan

Prior to the issuance of any building permit for any phase of project development, the project applicant shall develop a Vibration Reduction Plan in coordination with an acoustical consultant, geotechnical engineer, and construction contractor, and submit the Plan to the City's Chief Building Official for review and approval. The Plan shall include measures demonstrated to ensure vibration exposure for all vibration-sensitive receptors in the vicinity of the project site is less than 80 VdB. Measures and controls shall be identified based on project-specific final design plans, and may include, but are not limited to, some or all of the following to ensure compliance with the City's performance standards:

- Buffer distances, the type of equipment, and the technique of pile installation shall minimize construction vibration for adjacent existing buildings and vibration-sensitive uses, consistent with the above-described performance standards.
- Designate a disturbance coordinator and conspicuously post this person's number around the project site, in adjacent public spaces, and in construction notifications. The disturbance coordinator shall be responsible for responding to any complaints about construction activities. The disturbance coordinator shall receive all public complaints about construction disturbances and, in consultation with the City, is responsible for determining the cause of the complaint and implementation of feasible measures to be taken to alleviate the problem. The City shall have the authority to halt vibration-generating activity if necessary to protect public health and safety.
- Adjacent vibration-sensitive uses (i.e., residential, educational, religious, lodging) within 100 feet of construction activity shall be notified of the construction schedule, as well as the name and contact information of the project disturbance coordinator.

This mitigation measure would adhere to a performance standard that would serve to minimize vibration during project construction through the provision of appropriate buffer distances, equipment selection, and pile installation techniques, and further would provide notification to nearby land uses and appoint a project coordinator to receive and rectify any associated complaints. Thus, with the above mitigation measures, the annoyance impact of project construction-related vibration would be **less than significant**.

With respect to building damage during project construction activities, according to FTA guidelines, a vibration-damage criterion of 0.20 in/sec PPV (Peak Particle Velocity) should be considered for non-engineered timber and masonry buildings. Furthermore, structures or buildings constructed of reinforced concrete, steel, or timber have a vibration-damage criterion of 0.50 in/sec PPV pursuant to the FTA guidelines (FTA 2018). As shown in Table 4.13-4, project-related construction vibration level at 40 to 100 feet (representing distances to the nearest sensitive uses to the project site) would be approximately 0.011 to 0.044 PPV. This level of vibration is below any of the established threshold of significance and would not likely be perceptible. Therefore, this impact would be **less than significant**.

With respect to project operation, the only source of vibration under the proposed project operation would be heavy truck traffic accessing the site for deliveries and other occasional needs. Heavy truck traffic can generate groundborne vibration; however, groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the road right-of-way. This impact would be **less than significant**.

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?

No Impact. The project sites are not located within 2 miles of a public airport. The nearest airport, San Carlos, is located approximately 2.2 miles north of the project site. Because all project activities would be located outside of the Airport Comprehensive Land Use Plan area and the project would not involve any aircraft uses for construction or operations, the proposed project would not affect any airport operations. Therefore, the project would have **no impact**.

References:

California Department of Transportation. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September 2013. http://www.dot.ca.gov/env/noise/docs/tens-sep2013.pdf

Caltrans. *See* California Department of Transportation.

EPA. *See* U.S. Environmental Protection Agency.

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4.14 Population and Housing

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV.	**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)?	☐	☐	☒	☐
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

4.14.1 Setting

Population

The California Department of Finance (DOF) estimates the City of Redwood City's total population increased from 75,402 in 2000 to 76,815 in 2010, or a 1.8% increase over the 10-year period (DOF, 2012; 2018). As of May 2018, the DOF estimated the City of Redwood City's total population was 86,380, which is a 12.5% increase from the City's 2010 population of 76,815 (DOF, 2018). The population growth rate in the City is at a higher rate than that of San Mateo County as a whole, which had a growth rate of approximately 7% from 2000 to 2010. According to the Redwood City General Plan Housing Element, the City is anticipated to experience a 20% population increase by 2030 (Redwood City 2014).

Housing

According to the DOF, the total number of housing units in Redwood City was 30,693 in 2018, with an average household size of 2.82 persons per unit. Approximately 45% of housing units were single detached homes and 33% of housing units were five-plus units, such as apartments (DOF 2018). This is an increase of 5.2% from the 29,167 housing units reported by the 2010 Census, or an average increase of 191 units per year. Single-family housing units (both detached and attached) account for 59% of the housing stock in Redwood City. As of 2018, Redwood City has a vacancy rate of 2.1%, which is noticeably lower than the rate of 4.1% reported by the 2010 Census, even with the increase in number of housing units. A low vacancy rate often means that households are having difficulty finding housing within their price range; a high vacancy rate may indicate an oversupply of units. The city's current vacancy rate is lower than the county's vacancy rate of 4.7%. The county's vacancy rate reported by the 2010 Census was 4.9%.

Employment

ABAG estimated that jobs in Redwood City would grow from 68,240 jobs in 2018 to 77,480 jobs in 2040. This represents a total increase of 9,240 jobs, and a growth of 13.5%, or approximately 420 jobs per year. During the same 22-year period, the number of jobs in San Mateo County is projected to grow by 12.8%. The total employed residents in the city and the county are also projected to follow the same pattern, with a 16.7% increase in the City, and 13.5% increase in the County.

4.14.2 Discussion

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)?

Less than Significant Impact.

Construction: An estimated 90 daily construction employees would be required for construction of the proposed project. Construction would begin in 2020 and is anticipated to last 25 to 27 months. The source of the construction labor force is unknown at this time, but workers would likely come from the local labor pool, and not relocate to the Redwood City from other areas. Therefore, there would be **no impact** from construction of the proposed project on population growth.

Operation: The proposed project would directly induce population growth in the City of Redwood City through residential development; and indirectly through commercial retail and office development. The project would include 252 residential units. Assuming an average of 2.7 residents per unit[14], there would be an increase of 680 permanent residents, or approximately 0.79%of the total existing population. The housing units are anticipated to be developed by 2022 and would represent 0.74%of the housing growth expected in Redwood City by 2030[15]. The 680 new residents resulting from the proposed project would result in a minimal increase in the City's future growth forecasts. The projected increase in residents from the proposed project would be consistent with the City's population growth projection.

With the development of commercial, retail, and office uses, including child care and entertainment uses totaling approximately 585,000 square feet, the proposed project would generate approximately 2,213 net new employees on site[16]. According to ABAG, the current employment in Redwood City in 2013 was 64,640 and is anticipated to increase to 80,430 by 2025. The increase in employees from the proposed project would represent 2.75% of the 2025 estimated employment in Redwood City. The proposed project is consistent with the General Plan land use designation. Therefore, the proposed project is anticipated to be within the expected growth level, as discussed in the General Plan Housing element; and is not expected to significantly affect the jobs-housing balance.

The proposed project would have a **less-than-significant impact** related to inducing substantial unplanned growth in the City of Redwood City.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Less than Significant Impact. The project site contains four units currently occupied by approximately 11 residents[17] at 1306 Main Street. Redwood City would provide relocation assistance to the residents prior to demolition, including the creation of replacement units on Parcel F. Impacts associated with construction of replacement housing on Parcel F would be considered in the EIR.

The remaining parcels are occupied by commercial and office-building occupants, and therefore would not displace any additional people or housing. Because the project would displace a minimal

[14] Average Household Size per Redwood City General Plan.
[15] Based on projected population in Redwood City by 2030 of 91,900, and an average household size of 2.7, there will be an estimated 34,037 housing units by 2030.
[16] The City's General Plan EIR projects that 6,683,959 net new square feet of non-residential development projected for 2030 would generate 25,323 employees (6,683,959 ÷25,323 = 263.9). Source: City of Redwood City, 2010, A New General Plan for Redwood City Draft Environmental Impact Report, Table 3-3.
[17] Based on Redwood City Average Household Size of 2.7.

amount of existing people and housing, and it would include replacement housing, there would be a **less than significant impact**.

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4.15 Public Services

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV.	**Public Services. Would the project:**				
a)	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
	Fire protection?	☐	☐	☒	☐
	Police protection?	☐	☐	☒	☐
	Schools?	☐	☐	☒	☐
	Parks?	☐	☐	☒	☐
	Other public facilities?	☐	☐	☒	☐

4.15.1 Setting

Fire Protection Services

The Redwood City Fire Department (RCFD) provides fire protection and suppression, and emergency medical services to the city. The RCFD is currently staffed by over 90 personnel, including captains and battalion chiefs, firefighter-paramedics, firefighters, fire prevention staff, training staff, and administrative staff located at seven stations (RCFD, 2019a). The RCFD's Insurance Services Office rating is currently a Class 1 (RCFD, 2019b).[18]

The project site would be served by Fire Station #9, which also serves the Downtown area (Redwood City, 2019a). Fire Station #9 is located at 755 Marshall Street, approximately 0.8 mile north of the project site. Station #9 houses the RCFD's administrative staff and fire prevention bureau, as well as the Alternate Emergency Operations Center for the City of Redwood City and the Alternate Fire Dispatch Center for San Mateo County Communications (RCFD, 2019b).

Response from this station is currently provided with an engine staffed by a fire captain and two firefighters, one ladder truck staffed with a fire captain and three firefighters, and one duty battalion chief (RCFD, 2019b;. The estimated current travel time from this station to the project site is less than approximately 5 minutes or less (Harris, pers. comm., 2019).

Police Protection Services

The Redwood City Police Department (RCPD) provides police service within the Redwood City limits. The RCPD provides service from one central police station—its headquarters, located at 1301 Maple Street,

[18] The Insurance Services Office rating is the recognized classification for a fire department or district's ability to defend against major fires. A rating of 10 generally indicates no protection, whereas an ISO rating of 1 indicates superior property fire protection.

approximately 1.5 miles northeast of the project site. One substation is located in Downtown Redwood City at the Fox Theater at 2215 Broadway.

The RCPD is composed of 96 sworn officers, 36 civilian employees, 4 reserve officers, and 25 volunteers (RCPD, 2019a). The sworn employees include one police chief, one deputy police chief, two captains, four lieutenants, 11 sergeants, and 78 officers. The City does not use an officer-to-population ratio as a specific goal for police service (Osborne, pers. comm., 2019).

The Patrol Division is the Department's largest organizational component, and includes all uniformed officers who respond to emergency and non-emergency calls for service, as well as specialized functions such as the Patrol Unit, Marine Unit, Canine officers, Community Policing Activities Team, School Resource Officer Program, Traffic Enforcement Unit, and the Parking Enforcement Unit. In an average year, the division responded to over 77,000 different calls for service, ranging from serious in-progress crimes to parking violations (RCPD, 2019b).

The RCPD has permanently staffed police patrol areas (beats). The project site is located in Beat 3 (Redwood City 2019b). Beat 3 has officer coverage 24 hours per day, 7 days per week. Emergency units are routinely on patrol within their assigned beat, making emergency dispatch and response relatively immediately. Response times in the vicinity of the project site are typically less than 5 minutes for emergency calls, approximately 7 minutes for priority calls, and less than 7 minutes for routine calls (Osborne, pers. comm., 2019).

Schools

Elementary school students occupying the project site would be in the Redwood City School District (RCSD) and Sequoia Union High School District (SUHSD). These districts are discussed below, along with their schools that would accommodate new students generated by the proposed project.

Redwood City School District

RCSD comprises 17 schools serving students in grades Pre-K through 8 in Redwood City and portions of Atherton, Menlo Park, San Carlos, and Woodside. Enrollment for the 2018-2019 school year for the entire RCSD was 8,752 students: 5,925 elementary school students (grades K-5) and 2,827 middle school students (grades 6-8) (California Department of Education, 2019a). Parents have the option of transferring their child to any of the district’s schools if space is available.

The project site is within the attendance boundary of the Hoover Community School, located at 701 Charter Street, approximately 1.5 miles northeast of the project site. Hoover Community School has 47 classrooms, one portable, a multipurpose room/cafeteria, library, one computer lab, one science laboratory, and an administration office (RCSD, 2015). The Hoover Community School has a design capacity of 785 students (RCSD, 2015). Enrollment for the 2018-2019 school-year for Hoover Community School was 652 students; therefore, Hoover Community School is operating below design capacity (California Department of Education, 2019a; RCSD, 2015).

The RCSD Facilities Master Plan anticipates enrollment at Hoover Community School will decline between 2013 and 2023; from 829 students to 746 students (RCSD, 2015). As part of its expected contraction, RCSD is implementing several school closures and consolidations: Fair Oaks Elementary School will merge with Taft Elementary School; Hawes Elementary School students will be distributed between Henry Ford and Roosevelt campuses; and Orion students will be sent to John Gill Elementary School. Hoover Elementary, which is the school closest to the project site is not expected to receive a significant number of new students from the closed campuses.

As discussed further below, per the development fee sharing agreement with the SUHSD, RCSD is entitled to receive 60% of the developer fees collected for new residential, commercial, and industrial development (SUHSD, 2019).

Sequoia Union High School District

SUHSD is composed of four comprehensive high schools (grades 9-12), a charter school, an adult school, and a continuation high school. Enrollment for the 2018-2019 school year for the entire SUHSD was 10,246 students (California Department of Education, 2019b).

The project site is within the attendance boundary of Sequoia High School, located at 1201 Brewster Avenue, approximately 1.5 miles northwest of the project site. Sequoia High School currently has 128 classrooms, administration offices, three gyms, a dance studio, athletic fields, a pool, art gallery, library/media-center, multi-use room/cafeteria, theater, and a woodshop (SUHSD, 2019). Sequoia High School has a design capacity of approximately 2,900 students (Jack Schreder & Associates, 2018). Enrollment for the 2018-2019 school year for Sequoia High School was 2,067 students; therefore, Sequoia School is operating below design capacity (California Department of Education, 2019b). The SUHSD Facilities Master Plan anticipates enrollment at Sequoia High School will be 2,158 students by 2020 (SUHSD, 2015).

The SUHSD conducted a developer fee study that demonstrated the need to levy Level I developer fees on new development.[19] As of June 2018, Level I fees are $3.79 per square foot for residential construction, and $0.61 per square foot of commercial/industrial construction (Jack Schreder & Associates, 2018).

The SUHSD currently shares developer fees with its feeder districts, including the RCSD. The developer fee sharing arrangement between these districts is currently 40% for the high school district, and 60% for the feeder districts. Therefore, the SUHSD collects $1.52 (40% of $3.79) per square foot for residential construction, and $0.24 (40% of $0.61) per square foot of commercial/industrial construction (Jack Schreder & Associates, 2018).

Parks

The Redwood City Parks, Recreation and Community Services Department provides parks, facilities, and other public spaces to Redwood City. The Redwood City Parks, Recreation and Community Services Department maintains over 30 parks, including dog parks, skate sparks, and outdoor pools, totaling more than 180 acres.

The City completed a Parks and Facilities Needs Assessment (Needs Assessment) in 2008, which provided an inventory and qualitative assessment of the City's current and anticipated needs for parks and recreational facilities, as well as specific recommendations that would help realize the goal of having 3.0 acres of parkland per 1,000 persons, while also ensuring the appropriate distribution of such parklands throughout the City (Redwood City Parks, Recreation and Community Services Department, 2008). The Needs Assessment noted that existing parklands are not evenly distributed throughout the City. Some portions of the City have a relative excess of parkland when compared to other portions.

The project site is identified in the Needs Assessment as part of the Downtown Planning Area. There are nine parks totaling 4.45 acres in the Downtown Planning area. Existing parks within 0.5 mile of the project site include the following:

- Main Street Dog Agility Park is located at 1295 Main Street at Beech Street, adjacent to Parcel E to the north. This 0.14-acre special use park is an off-leash dog park, and features a decomposed granite play area and agility course activities.

[19] Level I fees are the current statutory fees allowed under Education Code Section 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities.

- John Roselli Memorial Park is approximately 0.3 mile northwest of the project site at the intersection of Pennsylvania Avenue and Maple Street, adjacent to the Redwood City Library. This 0.64-acre mini-park includes green space and a picnic table.
- Jardin De Ninos is approximately 0.4 mile northeast of the project site at the intersection of Middle Field Road and Chestnut Street. This 0.32-acre mini-park includes picnic tables, a playground, and restrooms.

The Needs Assessment identified the need for an additional 25.08 acres of active parkland in the Downtown planning area (Redwood City Parks, Recreation and Community Services Department 2008).

The City's park standard of 3.0 acres of developed parkland per 1,000 persons was incorporated into Chapter 30, Article XII of the Redwood City Municipal Code. As a condition of approval of a tentative or final subdivision map or parcel map, proponents of new development must dedicate land, pay a fee in-lieu thereof, or both, at the time; and according to standards and formulas contained in this Article. This is consistent with the Quimby Act, which allows parkland acquisition and development fees to be assessed on new development at an amount proportionate to attaining the standard of 3 acres per 1,000 persons.

4.15.2 Discussion

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire Protection

Construction of the proposed project could result in a small, temporary increase in the demand for fire suppression and emergency medical services due to the temporary presence of construction personnel in the area. Project staffing levels for construction would vary with on-site activities but are not expected to exceed on average 350 construction workers at any one time, and last 25 to 27 months. Federal and state worker safety regulations would be followed to minimize the likelihood of workplace injuries and accidents requiring emergency medical attention. Typical fire and safety precautions would be taken, such as prohibiting on-site fires; reporting any fires, even if they have been extinguished; discarding any smoking materials in approved containers; maintaining access to emergency vehicles; and maintaining access to fire hydrants, emergency water tanks, and emergency turnouts. Such activities would not necessitate construction of new fire protection facilities or affect emergency response times.

The proposed project would consist of multi-family residential uses, retail uses, commercial and office space, and a child care facility that would increase demand for RCFD fire protection services and facilities. As discussed above, the RCFD's Station #9provides fire protection services to existing development on the project site. The proposed project would not affect RCFD's response times or other performance objectives and would not result in the construction of new or expansion of existing fire protection facilities based on the demand generated by the project (Harris, pers. comm., 2019).

Project applicants would be required to incorporate California Fire Code requirements, which identify minimum requirements for providing a reasonable level of life safety and property protection from fire hazards. These requirements address fire hydrant locations, street width, circulation, and project access for fire and emergency response. In addition, the proposed project would comply with the City's requirements for installation of automatic sprinkler systems consistent with Section 12.18 of the City's Municipal Code. Furthermore, the project applicant must demonstrate, in conformance with the City's Engineering Standards, that water supplies meet fire flow requirements.

Project applicants would be required to demonstrate to the RCFD and the Redwood City Community Development Department that applicable California Fire Code requirements and City standards are incorporated into project designs during review and approval of project plans prior to issuance of building permits, issuance of a certificate of occupancy, or final inspections.

Incorporation of all California Fire Code and City requirements into project designs would reduce the dependence on RCFD fire department equipment and personnel by reducing fire hazards. Because the project would incorporate design measures to minimize the risk of fire at the project site and would not increase response times in the project area, the proposed project would not affect RCFD's response times or other performance objectives. Therefore, the project would not result in the construction of new or expansion of existing fire protection facilities based on the demand generated by the project. This impact would be **less than significant**.

Police Protection

The proposed project would consist of multi-family residential uses, retail uses, commercial and office space, and a child care facility that would increase demand for RCPD services and facilities. As discussed above, the RCPD provides service from one central police station, which is approximately 1.5 miles northeast of the project site at 1301 Maple Street. Because the project site is currently developed, nearby services and patrols are already available.

Response times in the vicinity of the project site are typically less than 5 minutes for emergency calls, approximately 7 minutes for priority calls, and less than 7 minutes for routine calls. The proposed project would not affect RCPD's response times or other performance objectives and would not result in the construction of new or expansion of existing police protection facilities based on the demand generated by the project (Osborne, pers. comm., 2019). This impact would be **less than significant**.

Schools

Residential development within the project site would generate school-aged children within the RCSD and SUHSD boundaries. Using RCSD's and SUHSD's student yield factors of 0.15 and 0.20 student per residential unit, respectively, the potential development of 252 residential units could generate approximately 38 new elementary and middle school students (grades K–8), and approximately 50 new high school students (grades 9–12) (Jack Schreder & Associates, 2018; Schoolhouse Services, 2013). This yield is a general estimate and actual student generation could be different for different unit types.

Students occupying the project site would attend Hoover Community School (grades K-8) and Sequoia High School (grades 9-12). As discussed above, both Hoover Community School and Sequoia High School are operating below design capacity. Enrollment at Hoover Elementary School is anticipated to decline between 2013 and 2023, and enrollment at Sequoia High School is anticipated to remain below design capacity beyond 2020 (RCSD, 2015; SUHSD, 2015). Therefore, it is likely that Hoover Community School and Sequoia High School would have sufficient capacity to meet the demands of project-generated elementary and middle students (38 students) and high school students (50 students) without requiring the construction of additional facilities; and the proposed project would not result in a shortfall of elementary, middle, or high school services or facilities.

SB 50 (Chapter 407, Statutes of 1998) instituted a school facility program by which school districts can levy fees for construction or reconstruction of school facilities. SUHSD levies Level I developer fees. As of June 2018, Level I fees are $3.79 per square foot for residential construction, and $0.61 per square foot of commercial/industrial construction, although these fees may increase by the time development is proposed (Jack Schreder & Associates, 2018). SUHSD would share 60% of the developer fees with RCSD. Pursuant to SB 50, the project applicant would be required to pay all applicable State-mandated school impact fees to SUHSD. The California Legislature has declared that payment of the applicable school impact fee is deemed to be full and adequate mitigation under CEQA

for impacts on school facilities (California Government Code Section 65996). Therefore, this impact would be **less than significant**.

Parks/Other Public Facilities

Implementation of the proposed project would result in increased demand for new parks. As discussed above, Chapter 30, Article XII of the Redwood City Municipal Code currently requires all new residential development to dedicate land and/or pay a fee in-lieu to meet the City's parkland standard of 3.0 acres of developed parkland per 1,000 residents. Based on the estimated 680 new residents generated by the proposed project, approximately 2.0 acres of developed parks would be required to be consistent with the City's Municipal Code.

The proposed project would provide public and private open space. However, this open space would not be considered active parkland as defined by Chapter 30 of the Redwood City Municipal Code. Because the project applicant would dedicate parkland or pay in-lieu fees, the proposed project would meet the City's parkland standard (see response to question (b) in Section 3.15, "Recreation," for further discussion of physical environmental effects resulting from construction of new parks). The project would not result in substantial increase in demand for other public facilities, such as libraries or other government services. Therefore, this impact would be **less than significant**.

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4.16 Recreation

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI.	**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?	☐	☐	☒	☐
	b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

4.16.1 Setting

The Redwood City Parks, Recreation, and Community Services Department provides parks, facilities, and other public spaces to Redwood City. The Redwood City Parks, Recreation, and Community Services Department maintains over 30 parks, including dog parks, skate parks, and outdoor pools, totaling over 180 acres (City 2008). Section 4.14 identifies existing neighborhood parks within 0.5 miles of the project site.

Other parks near the project site include:

- Main Street Dog Agility Park, adjacent to Parcel E to the north (1295 Main Street). Main Street Dog Agility Park is used as an off-leash dog park and features a decomposed granite play area and agility course activities.
- Jardin de Ninos Park, approximately 0.3 mile northeast of the project site (Middlefield Road and Chestnut Street). Jardin de Ninos Park is a 0.31-acre mini park that includes picnic tables, a playground, and restrooms.
- John Roselli Memorial Park, approximately 0.3 mile northwest of the project site at the intersection of Pennsylvania Avenue and Maple Street, adjacent to the Redwood City Library. This 0.64-acre mini park includes green space and a picnic table.
- Fleishman Park, approximately 0.7 mile south of the project site (Locust Street and McEvoy Street). Fleishman Park is a 0.63-acre neighborhood park that includes playgrounds, picnic tables, barbeques, and restrooms.
- Linden Park, approximately 0.7 mile southeast of the project site (Linden Street and Park Street). Linden Park is a 0.22-acre mini park that includes a picnic table and a grass area.
- Hoover Park, approximately 1 mile northeast of the project site (2100 Spring Street). Hoover Park is 10.18 acres, and includes multiple playgrounds, picnic tables, restrooms, baseball, basketball, and soccer fields, swimming pools, and barbeques.

4.16.2 Discussion:

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?

Less than Significant Impact. As discussed in Section 4.13, Population and Housing, the proposed project would result in an increase in population by approximately 680 residents and 2,213 net new employees, increasing the demand for park and recreational facilities in the vicinity of the project site, including those listed above.

The proposed project would provide approximately 45,000 square feet of public open space throughout, and approximately 105,000 square feet of private open space for use by building occupants. The proposed open space would include a large entryway along the Main Street boundary; a publicly accessible, privately owned park; development of a community garden on an adjacent parcel outside the project scope; and creation of a publicly accessible, landscaped walkway to provide a connection between Downtown and the neighborhoods west of El Camino Real. The walkway would also serve as the trailhead for the City's envisioned intra-City trail network. The expansion of public and private open space would partially compensate for the increased demands for open space and park facilities generated by the proposed project.

In addition, per the Redwood City zoning regulations, areas zoned as Mixed-Use Corridor (including Mixed Use Corridor – El Camino Real) would provide a minimum amount of open space of 125 square feet per unit (City 2019). The proposed project would provide a sufficient amount of open space, totaling approximately 574 square feet of open space per residential unit.

To be consistent with the Redwood City parkland standard of 3.0 acres of developed parkland per 1,000 residents, the project would need approximately 2.04 acres of park space. However, consistent with the Redwood City Municipal Code, the project Applicant would be required to pay park impact fees. These funds would help the City construct or improve park space in the area. Because the future locations of park space funded by the City's park impacts fee fund are unknown at this time, it is not possible to analyze the environmental effects of their construction. Because the project applicant would pay parkland impact fees and would provide onsite recreational amenities, the project would have a **less than significant** impact.

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact. The proposed project would provide approximately 150,000 square feet of combined public and private open space. As stated above, the proposed project would include many open features such as green space, sitting areas, publicly accessible landscaped walkways, park, and the possibility for a community garden. The impacts resulting from construction of these features, in combination with the other proposed project features, are addressed throughout this Initial Study, and will be further addressed in the EIR. However, the provision of additional recreational facilities resulting from implementation of the proposed project would not result in any adverse physical effects. Therefore, the project would have a **less than significant** impact.

References

City of Redwood City. 2010. Redwood City General Plan. Available: https://www.redwoodcity.org/departments/community-development-department/planning-housing/planning-services/general-plan-precise-plans/general-plan. Accessed March 2019.

Redwood City Zoning, n.d. 54.4 – Open Space Regulations. Available: https://library.municode.com/ca/redwood_city/codes/zoning?nodeId=ART54MUMIENEDI_54.4OPSPRE. Accessed April 1, 2019.

Redwood City Parks, Recreation and Community Services Department. 2008. Parks and Facilities Needs Assessment Available: https://www.redwoodcity.org/departments/parks-recreation-and-community-services/Downtown-parks-assessment. Accessed April 1, 2019.

_____, n.d. Parks. Available: https://www.redwoodcity.org/departments/parks-recreation-and-community-services/parks. Accessed April 1, 2019.

4.17 Transportation and Traffic

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI.	**Transportation. Would the project:**				
a)	Conflict with a program plan, ordinance, or policy the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☒	☐	☐	☐
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c)	Substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
d)	Result in inadequate emergency access?	☐	☐	☒	☐

4.17.1 Setting

The project site is in the City of Redwood City at the periphery of the City's Downtown core (Figure 2.1 – Project Location), and comprises five blocks totaling 8.30 acres (Parcels A through E). The project site is bounded by El Camino Real, Maple Street, Elm Street, Main Street, Caltrain right-of-way, Chestnut Street, Shasta Street, and Cedar Street (Figure 2.2 – Project Site). Beech Street, Lathrop Street and Main Street run through the project site in a north-south direction.

The project site is regionally accessible via State Route 84, approximately 300 feet to the southeast of the project site; and the SR 84/US 101 interchange, about 1 mile to the northeast. Local access to the project site is via El Camino Real, which fronts the project site. The project site is in a transit-rich area, approximately 0.5 mile from the Redwood City Transit Center, and one block from the nearest SamTrans bus stop.

A full description of the project setting as relates to transportation and traffic would be provided in the EIR.

4.17.2 Discussion

a) Conflict with a program plan, ordinance, or policy the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Potentially Significant Impact. The proposed project would have the potential to conflict with a program plan, ordinance, or policy the circulation system, including transit, roadway, bicycle and pedestrian facilities, resulting in a **potentially significant impact**, and would be fully analyzed in the EIR.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Potentially Significant Impact. CEQA Guidelines Section 15064.3, subdivision (b) Criteria for Analyzing Transportation Impacts includes provisions for evaluation a project's transportation impacts

by using the vehicles miles traveled (VMT) metric. According to the guidelines, a lead agency may elect to be governed by the provisions of Section 15064.3 immediately; or beginning July 1, 2020, when the provisions apply statewide. CEQA Guidelines Section 15064.3, subdivision (b)(3) allows for a qualitative analysis of potential impacts related to VMT. Although the project meets the criteria outlined in CEQA Section 15064.3 (b.1), which states that a project located within 0.5 miles of a major transit stop or along a high-quality transit corridor would generally be presumed to have a less than significant transportation impact, a project specific traffic impact assessment is being prepared. The assessment would analyze the projects potential to increase VMT in the project area above established thresholds. Therefore, for the purposes of this Initial Study project impacts are considered to be potentially significant and further analysis would be included in the forthcoming project EIR.

c) Substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Impact. As described in Section 2.0, Project Description, the existing street network of the proposed project would be largely maintained. Shasta Street between Main Street and Chestnut Street would be closed to create additional green space. In addition, Beech Street would be reconfigured to align with Lincoln Street to the west, while a portion of Cedar Street east of Main Street would become a private street. Proposed site accessed would be provided at several points along El Camino Real, Lathrop Street, Main Street, and Shasta Street (see Figure 2.18, Site Circulation Plan, in Section 2.0, Project Description). Parking would be provided in below-grade parking garages in all buildings. The parking lot entrance for Parcels A and B would be available from Beech Street. Parking lot entrances for Parcel C would be from Cedar Street, for Parcel D via Elm Street, and Parcel E via Cedar Street. Each parking entrance would also accommodate loading docks and a bicycle entry. Any new roadway reconfigurations, including parking lot entrances, would comply with the City's standard conditions of approval, which includes review of such access areas by city engineers. Additionally, the project would implement the City's Engineering Standards as they pertain to roadway design (Redwood City, n.d.), which provides design standards for driveways, off-streets parking, and loading facilities. However, because the planned reconfiguration of the existing street network has not been finalized, the resulting project impact cannot be confirmed at this time. Therefore, for the purposes of this Initial Study the project impact is considered to be **potentially significant** and further analysis would be included in the forthcoming EIR to confirm the impact significance and if necessary provide recommended mitigation measures.

d) Result in inadequate emergency access?

Less than Significant Impact.

Construction: Any heavy vehicle traffic, such as haul trucks or flatbed trailers carrying equipment or materials, would be expected to use specified truck routes with adequate capacity and accommodations to handle such vehicles. As described in Section 2.6, Construction Activities and Schedule, site access during construction would be provided via a construction entrance off El Camino Real for heavy vehicles, unless precluded during limited periods by construction activities, with all other access (e.g., construction workers) provided via Main Street.

Project construction would result in several street closures. The streets would be closed to local traffic but would allow emergency access to the project site. The project would comply with City standard conditions of approval relating to parking management and lane closures during construction. Because the proposed project would develop and implement a construction traffic management plan, impacts associated with inadequate emergency access during construction would be **less than significant.**

Operation: Once project construction is completed, portions of the previous street network would return to primarily existing conditions. Permanent closure of Shasta Street between Main Street and

Chestnut Street would not impede emergency access to the site and surrounding area, because the streets did not serve as connectors. Additionally, the project would implement City standard conditions of approval, which requires that all buildings and parking garages have approved radio coverage for emergency responders. Emergency access to the site and surrounding area would generally continue to be provided as under existing conditions. Therefore, the project's operational impacts on transportation-related hazards and emergency access would be **less than significant**.

References:

City of Redwood City, n.d. Engineering Standards. Available: https://www.redwoodcity.org/departments/community-development-department/engineering-transportation/engineering/engineering-standards. Accessed May 2019.

4.18 Tribal Cultural Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources. Would the project:				
a) 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 geologically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listed in the California Register of Historical Resources, or in local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

4.18.1 Setting

Tribal cultural resources are defined in CEQA as a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe, which may include non-unique archaeological resources previously subject to limited review under CEQA.

Sacred Lands File Search

On December 28, 2018, AECOM requested a Sacred Lands File search and Native American contact list for the project site from the NAHC. On January 3, 2019, the NAHC responded that "no culturally sensitive properties were located within or near the project site". AECOM forwarded this information to the City.

Assembly Bill 52 Native American Consultation

AB 52 requires the lead agency to begin consultation with any California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe; and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation (Public Resources Code Section 21080.3.1[d]).

No California Native American tribes have requested consultation from the lead agency, Redwood City, pursuant to AB 52.

4.18.2 Discussion

a) 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 geologically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listed in the California Register of Historical Resources, or in local register of historical resources as defined in Public Resources Code section 5020.1(k)?

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than Significant with Mitigation. As discussed in Section 3.5, Cultural Resources, the project would include construction activities that may disturb previously unknown resources. These resources could include artifacts of importance to local tribes. Also, as noted above, no California Native American tribes solicited consultation from Redwood City, pursuant to AB 52. Given the level of previous disturbance on the project site, it is not expected that tribal cultural resources remain on site. However, it is possible that previously unknown buried resources could be encountered during ground-disturbing work. Construction of the project would include necessary excavation and grading of the existing project site. In the unlikely event that a tribal cultural resource is discovered, appropriate measures would be implemented to minimize potential impacts. Implementation of Mitigation Measure TRIBAL-1 would reduce impacts to tribal cultural resources to a less–than-significant level.

Mitigation Measure TRIBAL-1: Procedures for Inadvertent Discovery of Cultural Resources.

In the event that sensitive cultural resources are identified during project site preparation or construction activities, work shall be halted until a qualified archaeologist is contacted and makes recommendations. Specifically, if deposits of prehistoric or historic archaeological resources are encountered during project construction activities, all work within an appropriate buffer area around the discovery shall be stopped, and a qualified archeologist meeting federal criteria under 36 CFR 61 shall be contacted to assess the deposit(s) and make recommendations.

If deposits of prehistoric or historic archeological materials cannot be avoided by project activities, the City shall confirm that the project Applicant has retained a qualified archaeologist to evaluate the potential historic significance of the resource(s). If the deposits are determined to be non-significant by a qualified archaeologist, avoidance is not necessary. If the deposits are determined to be potentially significant by the qualified archaeologist, the resources shall be avoided if feasible. If avoidance is not feasible, project impacts shall be mitigated in accordance with the recommendations of the archaeologist, in coordination with the City and CEQA Guidelines Section 15126.4 (b)(3)(C), which requires implementation of a data recovery plan. The data recovery plan shall include provisions for adequately recovering all scientifically consequential information from and about any discovered archaeological materials and include recommendations for the treatment of these resources. In-place preservation of the archaeological resources is the preferred manner of mitigating potential impacts, because it maintains the relationship between the resource and the archaeological context. In-place preservation also reduces the potential for conflicts with the religious or cultural values of groups associated with the resource. Other mitigation options include, but are not limited to, the full or partial removal and curation of the resource.

The City shall confirm that the project Applicant has retained a qualified archeologist for the preparation and implementation of the data recovery plan, which shall be conducted prior to any additional earth-moving activities in the area of the resource. The recovery plan shall be submitted to the project applicant, the City, and the NWIC. Once the recovery plan is reviewed and approved by the City and any appropriate resource recovery completed, project construction activity within the area of the find may resume. A data recovery plan shall not be required for resources that have been deemed by the NWIC as adequately recorded and recovered by studies already completed.

Mitigation Measure TRIBAL-2: Worker Training

Prior to the issuance of grading permits, the City shall confirm the applicant has required all construction crews to undergo adequate training for the identification of federal- or state-eligible cultural resources; and that the construction crews are aware of the potential for previously undiscovered archaeological resources on-site, of the laws protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work.

References:

AECOM, 2019. Cultural Resources Technical Memorandum to Inform an Initial Study and Environmental Impact Report for the South Main Mixed-Use (1601 El Camino Real) Redevelopment Project, Redwood City, San Mateo County, CA. Accessed April 2019.

4.19 Utilities and Services

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX.	**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?	☐	☐	☒	☐
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☒	☐	☐
c)	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

4.19.1 Setting

Water Supply

Redwood City receives 100% of its potable water supply from the San Francisco Public Utilities Commission's (SFPUC's) Hetch Hetchy Regional Water System (RWS). The system currently provides an average of approximately 198 million gallons per day of water to 2.6 million users in San Francisco, Tuolumne, San Joaquin, Alameda, Santa Clara, and San Mateo counties. Approximately 85% of the water delivered by SFPUC comes from the Tuolumne River watershed, collected in Hetch Hetchy Reservoir in Yosemite National Park. The remaining 15% of the water for the RWS is obtained from local surface waters in the Alameda and Peninsula watersheds and is stored in San Francisco Bay Area reservoirs (Calaveras, San Antonio, Crystal Springs, San Andreas, and Pilarcitos reservoirs).

The Redwood City water system provides water to both Redwood City and portions of San Mateo County. This system covers approximately 17 square miles, generally bound by Interstate 280, Highway 101 and San Francisco Bay, Marsh Road and Whipple Avenue, in addition to the separate Redwood Shores area. The system has 13 turnouts from the five RWS/SFPUC pipelines located in Redwood City. There are also eight active permitting passages with the California Water Service Company, Mid-Peninsula Water District, and the City of Menlo Park. The potable water distribution system delivers water to 24 pressure zones through approximately 259 miles of pipelines, 12 active storage reservoirs, and 10 booster pump stations (EKI 2016).

The City currently has a total storage capacity of 21.2 million gallons (MG) and is in the process of constructing additional system storage. Of the 10 booster pumps located throughout the City, six have permanent standby generators. The City also has four portable generators and a portable pump for emergency use. (City, 2018). The potable water supply is managed by the Redwood City Water Department. The water that the City obtains from the Hetch Hetchy does not require treatment by the City (EKI 2016).

Existing public water mains are available along all City streets fronting of the project including a 10-inch main in Chestnut Street, 8-inch mains in Lathrop and Main Streets, 6-inch mains in Beech and Cedar Streets, and a 4-inch main in Elm Street (Talus Engineering 2018).

Potable Water Supply and Demand

The City has an annual potable water supply of 12,243 acre-feet per year (afy) per its Individual Supply Guarantee from the SFPUC. The City's total annual water demand in 2015 was 9,589 acre-feet, including both potable and recycled water, with a resulting surplus of 3,366 acre-feet of potable water supply (EKI 2016).

The City prepares an urban water management plan every 5 years to project future demand and evaluate the adequacy of existing and projected supply. The City's 2015 Urban Water Management Plan (UWMP) estimates future water demand based on population and employment growth within its service area consistent with the City's General Plan, and planned development projects that are a supplement to the General Plan and that will require a General Plan amendment (EKI 2016). The 2015 UWMP estimates that the total water supply demand, including both potable and recycled water, will be approximately 12,059 afy in 2020 and 13,697 afy in 2040, or an increase of 12%.

Potable water demand within the City's service area is not expected to exceed its Individual Supply Guarantee of 12,234 acre-feet per year in any normal year between 2020 and 2040. As such, the City is expected to have adequate water supplies during normal years to meet its total projected demands through 2040 (EKI 2016).

During dry and multiple-dry years, the City expects to experience some supply shortfalls. The City anticipates implementation of its Water Shortage Contingency Plan would curtail water demand to meet the available supplies during these years (EKI 2016). Redwood City's *Water Supply Contingency Plan* (WSCP) lists a number of actions to be taken by the City and water customers in the event of a water shortage for the purpose of reducing water demands, and includes 5 stages of curtailment levels, ranging from 10 percent to greater than 30 percent depending on the severity of the water shortage (EKI 2016). The WSCP indicates a Stage 1 water shortage may need to be declared in a single dry year scenario, and in a multiple dry year scenario a Stage 4 water shortage may need to be declared.

Recycled Water Supply and Demand

Chapter 38 of the Redwood City Municipal Code sets forth regulations regarding the water system serving Redwood City and other areas outside City limits. The chapter establishes water service areas and limits allowable connections that cross service area boundaries and establishes fees for water service and for new connections, including a facilities fee to provide for the use and construction of existing and future water system capital facilities.

The Redwood City Recycled Water Ordinance (Chapter 38, Article VIII of the Redwood City Municipal Code) outlines local regulations regarding the use of recycled water. It sets forth required usage of recycled water within a defined "Recycled Water Service Area." The ordinance requires use of recycled water in a variety of existing and new land uses/developments. Within the recycled water service area, new commercial, industrial, and institutional and multifamily residential projects must use recycled water for landscaping, and must also install a dual plumbing system so that recycled water can be utilized for restroom facilities. In addition to these mandatory uses, the ordinance sets forth a number of voluntary

uses inside and outside of the Recycled Water Service Area for commercial, residential, institutional, and governmental uses.

The recycled water system is owned and operated by the City. Silicon Valley Clean Water (SVCW, formerly known as South Bayside System Authority or SBSA) and Redwood City entered into agreements for the production and distribution of recycled water. Phase I of the City's recycled water plan has been implemented and recycled water is served to customers east of Highway 101 in Redwood Shores, the Greater Bayfront Area, and the Seaport Area. Phase 2A of the City's recycled water plan was completed in 2017, bringing recycled water pipes west of US 101 towards Downtown (Redwood City 2019). The recycled water system has been designed to deliver up to 3,238 afy by 2030. Current demand on the recycled water system is approximately 750 afy (EKI 2016). The current recycled water main ends at the intersection of Marshall Street and Walnut Street, approximately 0.5-mile from the project site.

The project site is within the adopted Recycled Water Service Area. However, recycled water service has not been extended to the project site (Talus Engineering 2018).

Wastewater

The City of Redwood City and the County of San Mateo's Fair Oaks Sewer Maintenance District (FOSMD) provide wastewater collection services in the city and in the vicinity of the project. Wastewater treatment services are provided by Silicon Valley Clean Water (SVCW) at its Waste Water Treatment Plant (WWTP) located in Redwood City.

Wastewater flows are defined as average dry weather flow (ADWF) and peak wet weather flow (PWWF). ADWF is the average flow that occurs on a daily basis with no evident reaction to rainfall. PWWF is the highest measured hourly flow that occurs during wet weather. Wastewater flows can vary with precipitation levels, as rainwater can enter the wastewater collection system through infiltration and inflow during significant rain events.

Redwood City has exceeded its PWWF capacity in the past. The SVCW treatment plant has an operating capacity of 29 million gallons per day (MGD) ADWF. The plant is permitted by the RWQCB to discharge 29 MGD ADWF into the San Francisco Bay. The current permitted peak wet weather capacity of the SVCW's waste water treatment plant is 71 MGD. Redwood City has a maximum output of 11.4 MGD. In 2015, Redwood City's ADWF was 5.82 MGD, which is about 51% of the allocated plant capacity.

The WWTP's peak wet weather flow capacity is 71 MGD of which Redwood City has a maximum output of 30.5 MGD. Redwood City has exceeded its PWWF capacity in the past due to infiltration and inflow during significant rain events. The City's updated Sewer Master Plan outlines projects that would help reduce PWWF (Redwood City 2013). The project area is located near two sewer mains identified as needing upgrades: Project ID 11 El Camino Real, Maple Street, Main Street and Project ID 12-Rev Lincoln Avenue, Beech Street, Stambaugh Street, Walnut Street. Project 11 is identified as needing approximately 3,300 feet of 15 inch pipe to accommodate flows, while Project 12-Rev is identified as needed 6,800 linear feet of pipe of 33 inches.

Sanitary sewer service to the project site is provided by the City of Redwood City. The existing sewer system at the project site includes a 10-inch main in El Camino Real and an existing 8-inch sewer main in Main Street and Beech Street. These pipes drain generally to the northwest to an existing 10-inch trunk main in Maple Street. An existing 6-inch sewer main is located in Lathrop Street heading northerly to the 10-inch main in Maple Street.

Storm Drainage

The public storm drain system is owned, operated and maintained by the City of Redwood City. It consists of a network of storm drain inlets, manhole, pipes, outfalls, channels, and pump stations designed to protect the public and infrastructure from flood waters during storm events. The various components of

the storm drain system function collectively to collect, convey, and discharge stormwater runoff to receiving water bodies. The City's storm drain system consists of 22 pump stations, 140 acres of stormwater retention basins (Redwood Shores Lagoon), 2,685 storm drain catch basins, 29 dewatering structures (Redwood Shores Lagoon), and over 13.65 miles of creeks, drainage ditches, and canals.

The topography at the project site is relatively flat and almost entirely covered with impermeable surfaces consisting of asphalt parking lots and buildings (see Table 4.10-1 above). The majority of the project site runoff drains generally by surface flow to the street gutters along parcel frontages where it is collected into a public storm drain system. The storm drain system drains to an existing 18-inch diameter concrete pipe in Lathrop Street, draining north to the Redwood Channel just north of Elm Street. The portion of the project to the east of Main Street drains towards the Caltrain right-of-way, where it drains through pipes ranging from 10- to 15-inch in diameter crossing the Caltrain tracks.

Solid Waste

Recology San Mateo County provides solid waste collection, transportation, and disposal services in Redwood City. Residential and commercial solid waste from Redwood City is transported to the Shoreway Environmental Center located on Shoreway Road in San Carlos. In 2017, the City disposed of a total of 73,632 tons of solid waste (CalRecycle 2018).

The majority of solid waste from the City is transferred to the Ox Mountain Sanitary Landfill located near Halfmoon Bay. It is a Class III municipal landfill that is permitted to accept general residential, commercial, and industrial refuse for disposal, including municipal solid waste, construction and demolition debris, green materials, and asbestos. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Ox Mountain Sanitary Landfill has a permitted maximum daily disposal capacity of 3,598 tons per day (tpd), a total maximum permitted capacity of 60.5 million cubic yards, and a remaining permitted capacity of approximately 22.2 million cubic yards. The Ox Mountain Sanitary Landfill has an estimated closure date of January 1, 2034 (CalRecycle 2019).

The California Integrated Waste Management Board of 1989 requires local agencies to implement source reduction, recycling, and composting that would result in a minimum of 50% diversion of solid waste from landfills, thereby extending the life of landfills.[20] For 2017, the target solid waste generation rate for Redwood City was 9.1 pounds per day (lb/day) per resident and 14.4 lb/day per employee, and the actual measured generation rate was 4.7 lb/day per resident and 6.4 lb/day per employee, which is less than the target solid waste generation rates (CalRecycle 2018).

4.19.2 Discussion

a) Require or result in the relocation or construction of new or expanded water, waste water treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact.

Water infrastructure

Onsite water infrastructure is present within the project site and would be relocated and/or upsized to serve the proposed project. The City requires new development to replace existing water mains less than 6 inches along the project's frontage. The existing 4-inch water main in Elm Street would be

[20] As of 2007, the 50% diversion requirement is measured in terms of per-capita disposal expressed as pounds per day (ppd) per employee. The new per capita disposal and goal measurement system uses an actual disposal measurement based on population, disposal rates reported by disposal facilities, and evaluates program implementation efforts.

replaced from Lathrop Street to Main Street with a new 8-inch (minimum) water main, and a new water main would be installed in the access alley from the existing railroad crossing to Chestnut Street (Talus Engineering 2018). The project would be required to extend a recycled water main to the site, which currently terminates at the intersection of Marshall Street and Walnut Street, approximately 0.5-mile from the project site. The pipeline extension would be constructed within City streets and in accordance with the applicable City standard conditions of approval, including any lane closures that would be addressed in the project's construction traffic management plan.

In addition to the pipeline extension, the project would provide recycled water services for dual plumbing and irrigation for use on Parcels A-E. Additionally, any infrastructure upgrades would take place in accordance with City's Engineering Standards Volume 3, Part VI that details design criteria for public and private water systems. The standard includes sizing criteria, alignment, materials, and maintenance requirements. With application of City standards and the incorporation of mitigation measures identified in this document and the forthcoming EIR (e.g., Air Quality impacts during construction and associated mitigation measures) the project is not expected to result in any significant impacts related the need for new or expanded water treatment facilities. In addition, a utility study to determine the need (size and location) for pipeline extension is currently being prepared. Although this impact is anticipated to be **less than significant** further information will be provided in the project specific EIR.

Wastewater Infrastructure

Onsite wastewater infrastructure is located within the project site and would be relocated and/or upsized to serve the proposed project. There is an existing 10-inch sewer main in El Camino Real and an 8-inch sewer pipeline in Main/Beech Street. The project may be required to upsize wastewater infrastructure to appropriately serve the project needs. Any construction impact related to the extension of infrastructure is studied in this Initial Study or will be addressed in the forthcoming EIR (e.g, Air Quality issues). Additionally, any pipeline upgrades would take place in accordance with City's Engineering Standards Volume 3, Part VI that details design criteria for public and private sanitary sewer systems and Attachments Q and L of the Redwood City Engineering Standard Design Criteria for water and sanitary sewer. The standard includes sizing criteria, alignment, materials, and maintenance requirements. With application of City standards and the incorporation of mitigation measures identified in this document and the forthcoming EIR, the project is not anticipated to result in any significant impacts specifically related to wastewater infrastructure. See response to Question (c) below for further discussion of wastewater treatment.

In addition, a utility study to determine the need (size and location) for pipeline extension is currently being prepared. Although this impact is anticipated to be **less than significant** further information will be provided in the project specific EIR.

Stormwater Infrastructure

Stormwater flows from the project site would be directed to the existing public storm drain system. A portion of Parcel E would utilize the existing 15-inch storm drain in Chestnut Street crossing Caltrain right-of-way. The remainder of the site would drain towards the existing storm drain system in Lathrop Street, discharging to the Redwood Channel. The existing 18-inch storm drain pipe in Lathrop Street is undersized for the existing 10-year storm event, and to accommodate the proposed project, a 30-inch pipe is proposed to accommodate stormwater flows from the project site (Talus Engineering 2018). In addition, on-site stormwater drainage would be provided by planters containing media filtration devices. Any stormwater upgrades would take place in compliance with City of Redwood City's Engineering Standards Volume 3, Part V, Storm Drain Design Criteria. A utility study to determine the need (size and location) for stormwater infrastructure extension is currently being prepared. Although this impact is anticipated to be **less than significant** further information will be provided in the project specific EIR.

Other Utilities

Electrical, natural gas, and telecommunications facilities are available at the project site. PG&E (electric and gas), AT&T, Comcast and Wave G (telecommunications) would be upsized during construction as necessary to provide system capacity in accordance with applicable standards. Some utility relocation would be necessary and would take place during project construction.

Conclusion

Construction of new and expansion of existing water, recycled water, wastewater, and stormwater drainage facilities required to serve the proposed project would result in the potentially significant environmental impacts identified in relevant sections throughout this Initial Study in connection with discussions of the impacts of overall site development. Mitigation measures are identified for potentially significant construction-related impacts to ensure those impacts are reduced to a less-than-significant level where possible. There are no additional potentially significant impacts associated with construction of water, wastewater, and stormwater drainage facilities beyond those comprehensively considered throughout the other sections of this Initial Study. Physical effects associated with construction of the proposed water, wastewater, and stormwater drainage facilities would be less than significant with incorporation of mitigation identified in this Initial Study or would be further addressed in the EIR.

The project would be responsible for the cost of analysis, design, and construction of all necessary upgrades or replacement to adequately serve the project with water, recycled water, stormwater, and sewer collection and transmission facilities, in accordance with the City Standards and Guidelines. Upgrades would potentially include pipes around, downstream and upstream of the project site.

Development of the proposed project with insufficient utilities to adequately convey stormwater and wastewater flows, and meet the project water demand, would result in a potentially significant impact. To ensure adequately-sized utilities are provided in support of the proposed project development, the following mitigation measure would apply:

Mitigation Measure UTL-1: Upgrade Existing Pipeline Infrastructure

Issuance of the project building permits is subject to completion of a utilities evaluation report, prepared by a qualified engineer and approved by the City, that substantiates the adequacy of existing utilities at the site or specifies the necessary upgrades to conform to City engineering standards. The utilities evaluation will specifically address the location and sizing of potable and recycled water, sewer, and storm utilities and identify necessary improvement to conform with City Engineering Standards. These standards include conformance with the City of Redwood City's Engineering Standards Volume 3, Part V, Storm Drain Design Criteria, The City's Engineering Standards Volume 3, Part VI detailing design criteria for public and private sanitary sewer systems, Section VI and Attachment Q and L of the Redwood City Engineering Standard Design Criteria for water, and the Redwood City Recycled Water Ordinance.

Because this mitigation measure would ensure that adequate utilities are available to serve the project, no substantial adverse environment effects related to insufficient public utilities would occur and the impact would be **less than significant**.

The provision of water, wastewater, and stormwater drainage resulting from implementation of the proposed project would not result in any adverse physical effects and therefore impacts would be **less than significant**. Although this impact would be **less than significant** further information will be provided in the project specific EIR.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant with Mitigation Impact. The Redwood City Design Standards water-demand factors were applied to each proposed land use. As shown on Table 4.19-1, the water supply demand for the proposed project would be would be approximately 128.3 afy. The current water supply demand for the project site is approximately 17 afy, and the project's estimated water demand would be **more** than the existing water demand for the project site.

Table 4.19-1 South Main Mixed-Use Water Demands

Parcel	Water Demand (afy)
Parcel A	38.23
Parcel B	20.13
Parcel C	19.06
Parcel D	16.20
Parcel E	30.25
Total	**123.87**

afy = acre-feet per year

Source: Talus Engineering 2018

As discussed above, the City is expected to have adequate water supplies during normal years to meet its total projected demands through 2040 (EKI 2016). During dry and multiple-dry years, the City expects to experience some supply shortfalls. However, the City anticipates implementation of its Water Shortage Contingency Plan would provide additional water supplies to meet demands during these years (EKI 2016). In addition, the City is in the process of completing the project specific water supply assessment (WSA) per SB 610 requirements. The WSA information will be presented in the project specific EIR.

While the project site is within the City's adopted Recycled Water Service area as noted above, the proposed project would be required to extend recycled water service infrastructure to the project site. The proposed development would be conditioned to provide dual plumbing that would include a separate system for water closets, urinals, trap primers, and landscaping irrigation at the time of construction.

The proposed project would be required to implement measures described in Chapter 6 of the 2016 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) to reduce indoor demand for potable water and reduce landscape water usage.[21] In addition, the proposed project would be required to comply with the City of Redwood City's Municipal Code requirements described above and engineering standards to minimize water usage. In dry or multiple dry years, the project would comply with the City's Water Shortage Contingency Plan.

Because the water demand estimated for the proposed project could be accommodated by the existing water supplies identified in the City's 2015 UWMP and would comply with mandatory water conservation regulations, sufficient water supplies available to serve the project and reasonably

[21] The proposed project would be required to implement measures described in Chapter 6 of the 2016 CALGreen Code (Title 24, Part 11 of the California Code of Regulations). These measures would reduce indoor demand for potable water by 20% and to reduce landscape water usage by 50%. It also requires separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects.

foreseeable future development during normal, dry and multiple dry years. Although this impact would be **less than significant** further information will be provided in the project specific EIR.

The proposed project would also be required to meet the required fire flow velocities and flow durations pursuant to the California Fire Code and Redwood City Engineering Standards. According to City staff, the transmission and distribution systems are not sized to provide adequate flows and pressures under emergency service for future citywide development. Emergency water storage volume for emergency uses in a fire, earthquake, or a shutdown of Hetch-Hetchy pipes is also inadequate. Because the infrastructure to meet this requirement has not been incorporated as a component of the proposed project, in case of an emergency the project could contribute to a deficit in emergency water supply. This is a significant impact and Mitigation Measure UTL-2 shall be required.

Mitigation Measure UTL-2: Emergency Water Storage

Based on the projected emergency potable water storage requirement for the proposed project, the project applicant shall contribute the funds equivalent to the cost of providing emergency water storage for all proposed uses to fund the design and construction of the planned off-site areawide storage facility. The estimated cost in 2011 dollars is approximately $3,061 per residential unit or the office equivalent.

Mitigation Measure US-3 would require that the project contribute to the construction of new water storage facilities to ensure adequate water supply for emergency usage. The construction and operation of water storage facilities would be done in accordance with applicable State and local regulations. The City would be responsible for the planning, design, analysis, and construction of these facilities. As the size, location, and design of these future facilities are currently unknown, it would be speculative to analyze the environmental effects of their construction. Therefore, impacts would be **less than significant.**

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. Wastewater generation is considered to be 95% of indoor water demand (City 2019). The proposed project's sewer demand was calculated using the Redwood City Engineering Design Standards Attachment L. Peak flow was found to occur during business hours due to the large amount of office use. The estimates below in Table 4.19-2 are based on the initial proposed projects, which included a higher residential and commercial space.

Table 4.19-2 South Main Mixed-Use Wastewater Flow

Parcel	Avg. Daily Demand (gdp)	Peak Flow (gpm)
Parcel A	32,108	110.4
Parcel B	17,015	59.1
Parcel C	16,087	55.9
Parcel D	14,924	47.5
Parcel E	25,111	87.2
Total:	**105,245**	**360.1**

Source: Talus Engineering 2018

The project would contribute 0.11 MGD to the SCVW's WWTP, which is approximately 1% of Redwood City's allocated capacity. Therefore, the SVCW WWTP would have adequate capacity to

accept wastewater produced by the project. In addition, the proposed project would be required to implement measures described in Chapter 6 of the 2016 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) to reduce indoor demand for potable water which would further minimize wastewater flows.

Parcels A & B would drain to the existing 10-inch main in El Camino Real, while the remaining parcels (C, D & E) would drain to the 8-inch sewer pipe crossing the Caltrain tracks in Main Street. Based on the Peak Flow assumptions, the 10-inch sewer main in El Camino Real and the 8" sewer pipe Main/Beech Street are sufficient to handle the increased sewer flows caused by redevelopment of the project site. In addition, the project would be required to comply with existing wastewater treatment requirements of the San Francisco RWQCB and water conservation policies enacted by the City which will minimize the amount of wastewater generated. As noted previously, the City's updated Sewer Master Plan identifies two existing sewer mains near the project that need upgrades based on current and projected conditions. Accordingly, the applicant would also be required to reduce infiltration and inflow to offset increased sewer demand from the project during wet weather by replacing aged sewer mains or pay an equivalent in-lieu fee. Because the existing wastewater treatment facilities has sufficient capacity, and the project sponsor would implement upgrades and/or make payment of in-lieu fees, the project impact would be **less than significant**.

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?

Less than Significant Impact. The proposed project would require demolition of existing development and generate various construction-period wastes, including scrap lumber, scrap finishing materials, various scrap metals, and other recyclable and nonrecyclable construction-related wastes. The 2016 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) requires all construction contractors to reduce construction waste and demolition debris by 60%. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the materials collected will be taken. The code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both (California Building Standards Commission 2016). In addition, the 2016 CALGreen Code requires that 100% of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

The Recycling and Salvaging of Construction and Demolition Debris Code (Chapter 9, Article XI of the Redwood City Municipal Code) requires all contractors to prepare a Waste Management Plan. The management plan must demonstrate that project waste entering landfill facilities would be reduced by a minimum of 65% by weight through recycling. The management plan must identify the sources of recyclable materials, estimate the weight of material, and haul mixed construction and demolition debris off-site to a certified recycling facility for sorting and recycling. The management plan must be submitted to and approved by the City's Community Development Department before issuance of building permits.

Development of the proposed project would result in increased long-term generation of solid waste. The residential uses on project site would generate approximately 1.6 tpd of solid waste. Retail and office uses could generate approximately 7.1 tpd of solid waste.

Solid waste collected from the proposed project site would be hauled to the Ox Mountain Sanitary Landfill. The Ox Mountain Sanitary Landfill has a maximum permitted throughput of 3,598 tpd, a remaining capacity of approximately 22.2 million cubic yards, and an expected closure date of 2034 (CalRecycle 2018). The estimated 8.7 tpd of solid waste generated by the proposed project would be

less than 1% of the maximum tpd that could be received at the landfill. Therefore, sufficient landfill capacity would be available to accommodate solid-waste disposal needs for the proposed project.

The proposed project would comply with City recycling programs to reduce the volume of solid waste transported to landfills. The City provides residential recycling programs, such as recycling of paper, plastics, and bottles. In addition, the proposed project would comply with Assembly Bill (AB) 341, which mandates recycling for all businesses that generate more than 4 cubic yards of solid waste per week and for 5 or more multifamily dwellings units, and AB 1826, which requires recycling of organic waste.

For the reasons described above, the proposed project would not generate solid waste in excess of State or local standards or exceed the capacity of the Ox Mountain Sanitary Landfill. This impact would be **less than significant**.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. The proposed project would comply with all statutes and regulations related to solid waste, including the 2016 CALGreen Code, the Recycling and Salvaging of Construction and Demolition Debris Code (Section 9, Article XI of the Redwood City Municipal Code), AB 341, and AB 1826. Therefore, this impact would be **less than significant**.

References

California Department of Resources Recycling and Recovery. 2018. Jurisdiction Diversion/Disposal Rate Detail. Redwood City. Available: https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionDetail?year=2017&jurisdictionID=399. Accessed May 8, 2019.

California Department of Resources Recycling and Recovery. 2019. Solid Waste Information System. Facility/Site Summary Details: Corinda Los Trancos Landfill (Ox Mtn). (41-AA-0002). Available: https://www2.calrecycle.ca.gov/swfacilities/Directory/41-AA-0002/. Accessed: May 8, 2019.

EKI. 2016 (June). 2015 Urban Water Management Plan for the City of Redwood City. Available: https://www.redwoodcity.org/departments/public-works/water. Accessed May 9, 2019.

Redwood City. 2019. Recycled Water. Available: https://www.redwoodcity.org/departments/public-works/water/recycled-water. Accessed May 9, 2019.

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_____. 2013, City of Redwood City Sewer Master Plan Update.

Talus Engineering. 2018 (August). Preliminary Utilities Summary. Prepared for Greystar GP II, LLC. San Francisco, CA.

4.20 Wildfire

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. 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?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

4.20.1 Setting

The California Department of Forestry and Fire Prevention (CAL FIRE) Fire Hazard Severity Zones Map was developed to guide building standards for new construction; require use of natural hazard disclosure at time of sale; include a 100-foot defensible space clearance around buildings; establish property development standards; and provide considerations of fire hazards in city and county general plans. The proposed project is located in a Non-Hazard Fire Hazard Severity Zone and is not located in or near a State Responsibility Area, or an area classified as a Very High Fire Hazard Severity Zone (CAL FIRE, 2007; 2008).

CAL FIRE requires counties in the state to develop fire protection management plans that address potential threats of wildland fires. The project site is within the boundaries of the San Mateo-Santa Cruz Unit. The San Mateo-Santa Cruz 2018 – CZU Unit Strategic Fire Plan governs fire protection activities in Santa Cruz County, San Mateo County, and San Francisco County. The plan assesses fire potential within the unit and identifies strategies for pre-fire solutions and fire safety planning.

4.20.2 Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The discussion below applies to significance thresholds (a), (b), (c) and (d) as outlined above.

The project site is not within a State Responsibility Area or within a Very High Fire Hazard Severity Zone and is more than 1.5 miles from the nearest such area or zone (CAL FIRE, 2007; 2008). Therefore, the significance thresholds pertaining to wildfire hazards are not applicable to the proposed project. In addition, as discussed in Section 4.8, Hazards under Impact g, due to the urban nature and relatively flat topography of the project site and surrounding areas, the project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Therefore, there would be **no impact.**

References:

CAL FIRE, 2007. Fire Hazard Severity Zones in State Responsibility Areas adopted by CAL FIRE, San Mateo County. Available online at: http://frap.fire.ca.gov/webdata/maps/san_mateo/fhszs_map.41.pdf. Accessed January 25, 2019.

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4.21 Mandatory Findings of Significance

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI.	**Mandatory Findings of Significance.**				
	a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
	b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
	c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Authority: Public Resources Code Sections 21083 and 21083.05.

Source: Government Code Section 65088.4; Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095 and 21151; *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors* (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

4.21.1 Discussion

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Based on background research, site visits, and the analysis herein, the proposed project does not have the potential to 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; or reduce the number or restrict the range of a rare or endangered plant or animal. As discussed above in Section 4.4, Biological Resources, implementation of Mitigation Measure BIO-1 and Mitigation Measure BIO-2 would reduce such impacts on biological resources to **less than significant**.

The Initial Study has identified that the project could have **potentially significant** impacts in relation to historical architectural resources and archeological resources, as discussed above in Section 4.5, Cultural Resources. These impacts would be analyzed in the EIR.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Cumulative impacts, other than those related to air quality and GHG emissions, historical architectural resources, archeological resources, transportation, and utility systems would be less than significant, or the project would result in a less than cumulatively considerable contribution to cumulative impacts. Cumulative impacts related to the resource areas outlined above would be analyzed in the EIR.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Based on background research, site visits, and the analysis herein, construction of the proposed project could potentially cause substantial adverse effects on human beings in relation to air quality and GHG emissions, historical architectural resources, archeological resources, transportation, and utility systems. These impacts would be further analyzed in the EIR. No other adverse effects on human beings were identified in this IS.