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State Clearinghouse No. 2020010387

# CENTURY VILLAGES AT CABRILLO SPECIFIC PLAN EIR

for City of Long Beach

*Prepared for:*

**City of Long Beach**

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<http://www.longbeach.gov/lbds/planning/environmental/reports/>)*

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## Abbreviations and Acronyms

### ABBREVIATIONS AND ACRONYMS

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
amsl	above mean sea level
AQMP	air quality management plan
AST	aboveground storage tank
BAU	business as usual
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program

## Abbreviations and Acronyms

CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO <sub>2</sub> e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dba	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
HCM	Highway Capacity Manual
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
IPCC	Intergovernmental Panel on Climate Change
L <sub>dn</sub>	day-night noise level
L <sub>eq</sub>	equivalent continuous noise level
LBP	lead-based paint
LCFS	low-carbon fuel standard
LOS	level of service
LST	localized significance thresholds
M <sub>w</sub>	moment magnitude
MCL	maximum contaminant level
MEP	maximum extent practicable

## Abbreviations and Acronyms

mgd	million gallons per day
MMT	million metric tons
MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O <sub>3</sub>	ozone
OES	California Office of Emergency Services
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin
SO <sub>x</sub>	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

## Abbreviations and Acronyms

TAC	toxic air contaminants
TNM	transportation noise model
tpd	tons per day
TRI	toxic release inventory
TTCP	traditional tribal cultural places
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VdB	velocity decibels
VHFHSZ	very high fire hazard severity zone
VT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan
WSA	water supply assessment

# 1. Executive Summary

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## 1.1 INTRODUCTION

This Draft Environmental Impact Report (DEIR) addresses the environmental effects associated with the implementation of the proposed Century Villages at Cabrillo Specific Plan (Specific Plan). The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers. This document focuses on impacts determined to be potentially significant in the Initial Study completed for the Specific Plan (see Appendix A).

This DEIR has been prepared pursuant to the requirements of CEQA and the City of Long Beach's CEQA procedures. The City of Long Beach, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on City technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR derive from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments (e.g., air quality, cultural resources, geological and paleontological resources, environmental site assessment, hydrology and water quality, noise, transportation, and water supply).

## 1.2 ENVIRONMENTAL PROCEDURES

This DEIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the Specific Plan, as well as anticipated future discretionary actions and approvals. CEQA established six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
5. Foster interagency coordination in the review of projects.
6. Enhance public participation in the planning process.

## 1. Executive Summary

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

### 1.2.1 EIR Format

**Chapter 1. Executive Summary:** Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the proposed project.

**Chapter 2. Introduction:** Describes the purpose of this EIR, background on the proposed project, the notice of preparation, the use of incorporation by reference, and Final EIR certification.

**Chapter 3. Project Description:** A detailed description of the proposed project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this EIR.

**Chapter 4. Environmental Setting:** A description of the physical environmental conditions in the vicinity of the project site as they existed at the time the notice of preparation was published, from local and regional perspectives. These provide the baseline physical conditions from which the lead agency determines the significance of the proposed project's environmental impacts.

**Chapter 5. Environmental Analysis:** Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed development in the area.

**Chapter 6. Significant Unavoidable Adverse Impacts:** Describes the significant unavoidable adverse impacts of the proposed project.

**Chapter 7. Alternatives to the Proposed Project:** Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project/No Development Alternative and a Reduced Intensity Alternative.

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**Chapter 8. Impacts Found Not to Be Significant:** Briefly describes the potential impacts of the proposed project that were determined not to be significant by the Initial Study and were therefore not discussed in detail in this EIR.

**Chapter 9. Significant Irreversible Changes Due to the Proposed Project:** Describes the significant irreversible environmental changes associated with the proposed project.

**Chapter 10. Growth-Inducing Impacts of the Project:** Describes the ways in which the proposed project would cause increases in employment or population that could result in new physical or environmental impacts.

**Chapter 11. Organizations and Persons Consulted:** Lists the people and organizations that were contacted during the preparation of this EIR.

**Chapter 12. Qualifications of Persons Preparing EIR:** Lists the people who prepared this EIR for the proposed project.

**Chapter 13. Bibliography:** The technical reports and other sources used to prepare this EIR.

**Appendices:** The appendices for this document comprise these supporting documents:

- Appendix A: Initial Study/Notice of Preparation (NOP)
- Appendix B: NOP Comment Letters
- Appendix C: Air Quality/GHG Modeling Data
- Appendix D: Cultural and Paleontological Resources Assessment Report
- Appendix E: Geotechnical Engineering Investigation
- Appendix F: Phase I Environmental Site Assessment
- Appendix G: Infrastructure Reports
  - Appendix G1: Wastewater Infrastructure Technical Report
  - Appendix G2: Water Resources Technical Report
  - Appendix G3: Water Infrastructure Technical Report
  - Appendix G4: Water Supply Assessment
- Appendix H: Noise Modeling Data
- Appendix I: Transportation Impact Study
- Appendix J: Public Services Correspondence

### 1.3 PROJECT LOCATION

The development area covered by the Specific Plan (Plan Area) is in a highly urbanized area of the City of Long Beach (City), on the western edge of the City. The Plan Area encompasses 27-acres within a portion of a former United States Naval housing facility located at 2001 River Avenue. The Plan Area is within the Westside and Wrigley neighborhood area of the City. It is approximately 2.5 miles northwest of Long Beach's downtown core. The Plan Area is bordered by Cabrillo High School and associated campus facilities to the

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north and east; California State Long Beach Job Corps Center to the east; industrial uses (warehouse, distribution, and logistics) to the south; and warehouse, distribution and logistics uses to the west, across State Route 103 (SR-103, also known as Terminal Island Freeway). The San Pedro Branch railroad and Southern California Edison's electricity transmission corridor are also to the west, across SR-103. The Ports of Long Beach and Los Angeles are south.

Regional access to the Plan Area is provided by SR-1 (also known as Pacific Coast Highway), SR-103, and Interstate 710 (I-710). SR-1 runs east-west and SR-103, located near the western boundary of the Plan Area, and I-710 both run in a north-south direction.

### 1.4 PROJECT SUMMARY

Over the next 10 years, the project applicant (Century Housing Corporation) is seeking to redevelop portions of the Plan Area that consist of the former navy housing stock, transitioning the collection of antiquated structures and underutilized areas to modern affordable housing and service facilities along with key site improvements. The redevelopment effort will be realized through implementation of the Specific Plan, which is part of a collection of planning documents that effectively guide the services, housing, amenities, and programming for the Plan Area. Project implementation will require a Zoning Ordinance Amendment, Zoning Map Amendment, and adoption of the Specific Plan, along with other discretionary and non-discretionary. Refer to Section 3.5 of Chapter 3, *Project Description*, of this DEIR.

The mix of development accommodated by the Specific Plan will provide quality dwelling units for residents in need while hosting modern spaces for current and new social service providers, commercial uses, and community amenities. The Specific Plan serves as the master plan for a residential community that includes emergency, bridge/transitional, and permanent housing with support services and amenities. The Specific Plan regulates the Plan Area's allowable land use, circulation, open space, and development standards; and also provides the basis for the Leadership in Environmental and Energy Design (LEED)–Neighborhood Development (ND) certification documentation obtained by CVC in 2019.

Implementation of the Specific Plan involves the demolition of 235 dwelling units, 10,030 square feet of amenities (such as convenience stores, cafeteria, weight room, faith services, etc.), 10,200 square feet of educational uses, 7,250 square feet of administrative and support services, and removal of 153 parking spaces. The majority of buildings that will be demolished are along Williams Streets and toward the north end of San Gabriel Avenue. New development under the Specific Plan will include 750 dwelling units, 77,000 square feet of amenities, 15,000 square feet of educational uses, 17,000 square feet of commercial/retail uses, 48,000 square feet of administrative and supportive services, and 518 parking spaces. Buildout of the Plan Area under the Specific Plan will result in a total of 1,380 dwelling units, 79,350 square feet of amenities, 15,000 square feet of educational uses, 22,850 square feet of commercial/retail uses, 67,050 square feet of administrative and supportive services, and 877 parking spaces.

The existing and proposed buildings will range between 15 and 80 feet in height and will be arranged around a series of outdoor spaces and community amenities. Each new development accommodated by the Specific Plan will have residential units on the upper levels and ground floors occupied by consolidated bike and



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automobile parking, along with flexible spaces that can host service providers, administrative functions, and community amenities. New buildings will have similar unit mixes to that of Cabrillo Gateway and Anchor Place, including housing for veterans and nonveterans. New residential development will replace aging dwelling units while expanding affordable housing options for veterans, non-veterans, families, and individuals. The majority of new development accommodated by the Specific Plan will occur along the central and in the northwestern portions of the Plan Area, along Williams Streets and toward the north end of San Gabriel Avenue

Implementation of the Specific Plan will continue to serve the Plan Area's existing and future residents while upgrading and expanding the housing stock to address community needs. Dedicated veteran housing will continue to be the core offering with the initial phases of development focusing on replacing these units and upgrading the associated services and amenities. Housing dedicated for special needs individuals and seniors will also be part of the Specific Plan with new facilities for service providers that are not currently operating in the Plan Area. Some existing amenities will be realigned to better serve the intended populations while new contemplated amenities such as a dedicated senior center will be developed for the future population.

A detailed project description is provided in Chapter 3, *Project Description*, of this DEIR.

### 1.5 SUMMARY OF PROJECT ALTERNATIVES

The CEQA Guidelines (Section 15126.6[a]) state that an EIR must address “a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives.” The alternatives to the Specific Plan were based, in part, on their potential ability to reduce or eliminate the impacts determined to be significant and unavoidable for the Specific Plan. The following alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the Specific Plan but which may avoid or substantially lessen any of the significant effects of the project. These alternatives are analyzed in detail in Chapter 7, *Alternatives to the Proposed Project*, of this DEIR.

- No Project/No Development Alternative
- Reduced Intensity Alternative

An EIR must identify an “environmentally superior” alternative, and where the “No Project” Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral, or inferior. However, only impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Impacts involving construction-related air quality, greenhouse gas emissions, and construction-related noise were found to be significant and unavoidable, as disclosed in Chapter 6, *Significant Unavoidable Adverse Impacts*. Chapter 7 identifies the environmentally superior alternative.

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### 1.5.1 No Project/No Development Alternative

Section 15126.6(e) of the CEQA Guidelines requires analysis of the No Project/No Development Alternative. In accordance with the CEQA Guidelines, the No Project/No Development Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed as provided by Section 15126.6(e)(3)(B) of the CEQA Guidelines. Section 15126.6(e)(3)(B) provides that, “In certain instances, the no project alternative means ‘no build’ wherein the existing environmental setting is maintained.”

The No Project/No Development Alternative assumes the Specific Plan would not be adopted or implemented. It also assumes that no new development would occur and the Plan Area would remain in its existing condition and be considered built out. Therefore, all existing land uses, improvements, and services would remain with no additional development in the future. Some minor population growth could occur within the Plan Area, to the extent that existing residential units could accommodate additional residents (e.g., a decrease in vacancy rates). The existing development consists of 865 residential dwelling units and 54,730 non-residential square feet. None of the impacts of the Specific Plan, adverse or beneficial, would result under this alternative.

### 1.5.2 Reduced Intensity Alternative

The Reduced Intensity Alternative was analyzed to reduce environmental impacts related to air quality, GHG emissions, and noise. To accomplish the reduction, this alternative would reduce the proposed net new development intensity by 10 percent. This alternative would result in a net increase of 464 dwelling units and 116,568 square feet of nonresidential uses (amenities, education, commercial/retail, and service/administration). The development area under this alternative would be the same as with the Specific Plan, 27 acres. Like the Project, this alternative would require adoption of the Specific Plan.

## 1.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the Specific plan, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this DEIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed land use changes are compatible with the character of the existing area.
4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the DEIR.

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6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

### 1.7 AREAS OF CONTROVERSY

Prior to the preparation of the DEIR, the City of Long Beach circulated a Notice of Preparation (NOP) and Initial Study on January 27, 2020 (see Appendix A). Comments received during the Initial Study's public review period, from January 28, 2020 to February 26, 2020, are provided in Appendix B. In addition, a public scoping meeting was held during the 30-day public review period, on February 5, 2020 at 5:00 PM at the Century Villages at Cabrillo Social Hall, 2001 River Avenue, Long Beach, California 90810. A summary of comments received on the NOP are provided in Table 2-1; all NOP comments received during the public review period are provided in Appendix B. The table provides references to the sections of the DEIR in which these issues are evaluated. No other areas of controversy are known to the lead agency.

### 1.8 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table 1-1 summarizes the conclusions of the environmental analysis contained in this EIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<b>5.1 AESTHETICS</b>			
Impact 5.1-1: Implementation of the Specific Plan would not conflict with applicable zoning and other regulations governing scenic quality.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.1-2: Construction and operation of the Specific Plan would generate additional light and glare in the Plan Area and its surroundings, but would not create a new source of substantial light and glare that could adversely affect day or nighttime views in the area.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>5.2 AIR QUALITY</b>			
Impact 5.2-1: The Specific Plan is consistent with the applicable air quality management plan.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.2-2: Construction activities associated with the Specific Plan could generate short-term emissions that would exceed South Coast AQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the South Coast Air Basin (SoCAB).	Potentially Significant	<p>AQ-1 The construction contractor(s) shall incorporate the following measures into the proposed Project to reduce construction criteria air pollutant emissions, including VOC, NOX, PM10, and PM2.5, generated by construction equipment used for future development projects implemented under the proposed Century Villages at Cabrillo Specific Plan:</p> <ul style="list-style-type: none"> <li>All off-road equipment with engines rated at 50 horsepower or greater, shall at minimum, meet the United States Environmental Protection Agency's Tier 4 Interim emissions limits. An exemption from these requirements may be granted by the City of Long Beach (City) in the event that the applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment. Before an exemption may be considered by the City, the applicant shall be required to, at minimum, demonstrate that two construction fleet owners/operators in the Los Angeles Region were contacted and that those owners/operators confirmed Tier 4 Interim or better equipment</li> </ul>	Significant and Unavoidable

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**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>could not be located within the Los Angeles region. To ensure that Tier 4 Interim construction equipment or better would be used during the Proposed Project's construction, the City shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractor(s) must demonstrate the ability to supply the compliant construction equipment for use and provide to the City a list of all construction equipment proposed to be used that states the makes, models, Equipment Identification Numbers, and number of construction equipment onsite prior to any ground disturbing and construction activities.</p> <ul style="list-style-type: none"> <li>• Minimize simultaneous operation of multiple construction equipment units. During construction, vehicles in loading and unloading queues shall not idle for more than 5 minutes, and shall turn their engines off when not in use to reduce vehicle emissions.</li> <li>• Properly tune and maintain all construction equipment in accordance with manufacturer's specifications.</li> <li>• Where feasible, employ the use of electrical or alternative fueled (i.e., nondiesel) construction equipment, including forklifts, concrete/industrial saws, pumps, aerial lifts, air compressors, and other comparable equipment types to the extent commercially available.</li> <li>• To reduce the need for electric generators and other fuel-powered equipment, provide on-site electrical hookups for the use of hand tools such as saws, drills, and compressors used for building construction.</li> <li>• Develop a Construction Traffic Control Plan to ensure construction traffic and equipment use is minimized to the extent practicable. The Construction Traffic Control Plan shall include measures to reduce the number of large pieces of equipment operating simultaneously during peak construction periods, scheduling of vendor and haul truck trips to occur during non-peak hours, establish dedicated construction parking areas to encourage carpooling and efficiently accommodate construction vehicles, identify alternative routes to reduce traffic congestion during peak activities, and increase construction employee carpooling.</li> <li>• Encourage construction contractors to apply for South Coast Air Quality Management District "SOON" funds. The "SOON" program provides</li> </ul>	

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**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>funds to applicable fleets for the purchase of commercially-available low-emission heavy-duty engines to achieve near-term reduction of NOX emissions from in-use off-road diesel vehicles.</p> <p>AQ-2 The construction contractor(s) shall incorporate the following measures into the proposed Project to reduce construction fugitive dust emissions (PM10 and PM2.5), generated by grading and construction activities of future development projects implemented under the proposed Century Villages at Cabrillo Specific Plan, consistent with South Coast Air Quality Management District (South Coast AQMD) Rule 403, with a goal of retaining dust on the site:</p> <ul style="list-style-type: none"> <li>• Water, or utilize another South Coast AQMD-approved dust control non-toxic agent, on the grading areas at least three times daily to minimize fugitive dust.</li> <li>• All permanent roadway improvements shall be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on unpaved roads. To reduce fugitive dust from earth-moving operations, building pads shall be finalized as soon as possible following site preparation and grading activities.</li> <li>• Stabilize grading areas as quickly as possible to minimize fugitive dust.</li> <li>• Apply chemical stabilizer, install a gravel pad, or pave the last 100 feet of internal travel path within the construction site prior to public road entry, and to on-site stockpiles of excavated material.</li> <li>• Remove any visible track-out into traveled public streets with the use of sweepers, water trucks, or similar method as soon as possible.</li> <li>• Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads. Unpaved construction site egress points shall be graveled to prevent track-out.</li> <li>• Wet wash the construction access point at the end of the workday if any vehicle travel on unpaved surfaces has occurred.</li> <li>• Cover haul trucks or maintain at least 2 feet of freeboard to reduce blow-off during hauling.</li> <li>• Evaluate the need for reduction in dust generating activity, potential to stop work, and/or implementation of additional dust control measures if</li> </ul>	

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>winds exceed 25 miles per hour.</p> <ul style="list-style-type: none"> <li>Enforce a 15-mile-per-hour speed limit on unpaved surfaces.</li> <li>Provide haul truck staging areas for the loading and unloading of soil and materials. Staging areas shall be located away from sensitive receptors, at the furthest feasible distance.</li> <li>Construction Traffic Control Plans shall route delivery and haul trucks required during construction away from sensitive receptor locations and congested intersections, to the extent feasible. Construction Traffic Control plans shall be finalized and approved prior to issuance of grading permits.</li> <li>Review and comply with any additional requirements of South Coast AQMD Rule 403.</li> </ul> <p>AQ-3 To address the impact relative to volatile organic compound (VOC) emissions, the construction contractor(s) shall use Super-Compliant VOC-content architectural coatings (0 grams per liter to less than 10 grams per liter VOC) during Proposed Project construction/application of paints and other architectural coatings to reduce ozone precursors. If paints and coatings with VOC content of 0 grams/liter to less than 10 grams/liter cannot be utilized, the developer shall avoid application of architectural coatings during the peak smog season: July, August, and September. The developer shall procure architectural coatings from a supplier in compliance with the requirements of South Coast Air Quality Management District's Rule 1113 (Architectural Coatings).</p>	
Impact 5.2-3: Long-term emissions associated with the Specific Plan would not generate emissions associated with vehicle trips in exceedance of South Coast AQMD's threshold criteria.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.2-4: Operation of the proposed land uses accommodated under the Specific Plan would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	No mitigation measures are required.	Less than Significant



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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.2-5: Construction-related emissions associated with land uses accommodated under the Specific Plan could expose sensitive receptors to substantial concentrations of criteria air pollutants.	Potentially Significant	Mitigation Measures AQ-1 and AQ-2 apply.	Significant and Unavoidable
Cumulative Impacts (Construction)	Potentially Significant	Mitigation Measures AQ-1 through AQ-3 apply.	Significant and Unavoidable
<b>5.3 CULTURAL RESOURCES</b>			
Impact 5.3-1: There are no historical resources in the Plan Area; development pursuant to the Specific Plan would not result in an impact on identified historic resources.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.3-2: Development pursuant to the Specific Plan would not result in an impact on archaeological resources.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>5.4 ENERGY</b>			
Impact 5.4-1: Implementation of the Specific Plan would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.4-2: The Specific Plan would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant

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**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<b>5.5 GEOLOGY AND SOILS</b>			
Impact 5.5-1: Future development in the Plan Area pursuant to the Specific Plan would expose increased numbers of persons and structures to strong ground shaking from active faults in the region.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.5-2: Future development in the Plan Area pursuant to the Specific Plan would subject persons and structures to hazards from liquefaction.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.5-3: Future development in the Plan Area pursuant to the Specific Plan could subject persons or structures to hazards arising from off-site landslide, lateral spreading, subsidence, collapsible soils, or expansive soils.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.5-4: Build out of the Specific Plan could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant	<p>GEO-1 Prior to the issuance of grading permits for excavations of 20 feet or greater, the project applicant for each development or redevelopment project accommodated by the Century Villages at Cabrillo Specific Plan shall retain a qualified paleontologist who meets the Secretary of the Interior's Professional Qualifications Standards to monitor all grading activities. If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily stop construction work within 50 feet of the find in order to assess its significance. Suspension of ground disturbances in the vicinity of the discovery shall not be lifted until the paleontologist has evaluated the discovery. Work may continue in other areas of the Plan Area and for other project elements while the encountered find is evaluated.</p> <p>If upon examination the resource is determined to be a significant paleontological resource, the qualified paleontologist shall make recommendations on the treatment and disposition of the resource. The paleontologist shall prepare a Paleontological Resources Impact Mitigation</p>	Less than Significant

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**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Program (PRIMP) consistent with the guidelines of the Society of Vertebrate Paleontology. The PRIMP shall include the methods that will be used to protect identified paleontological resources, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading. A copy of the final report shall be submitted to the City of Long Beach Development Services Department.	
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>5.6 GREENHOUSE GAS EMISSIONS</b>			
Impact 5.6-1: Buildout of the Specific Plan could generate a net increase in GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than Significant	<p>GHG-1 New development within the Century Village at Cabrillo Specific Plan shall either 1) be certified LEED Silver Level at minimum, or equivalent program; or 2) implement the following, voluntary provisions of the California Green Building Standards Code (CALGreen). The project applicant/developer(s) shall provide documentation (e.g., building plans) of implementation of the applicable voluntary measures to the City of Long Beach Building &amp; Safety Bureau Official or his/her designee prior to the issuance of building permits.</p> <p>For nonresidential land uses and residential land uses the applicant/developer shall:</p> <ul style="list-style-type: none"> <li>Design and build structures to, at a minimum, meet the Tier 2 advanced energy efficiency requirements of the Nonresidential Voluntary Measures of the California Green Building Standards Code, Division A5.2, Energy Efficiency, as outlined under Section A5.203.1.2.2.</li> <li>Design the proposed parking areas to provide parking for low-emitting, fuel-efficient, and carpool/van vehicles. At minimum, the number of preferential parking spaces shall equal the Tier 2 Nonresidential Voluntary Measures of the California Green Building Standards Code, Section A5.106.5.1.2.</li> <li>Design the proposed parking areas to provide electric vehicle (EV) charging stations. At minimum, the number of EV charging stations shall equal the Tier 2 Nonresidential Voluntary Measures of the California Green Building Standards Code, Section A5.106.5.3.2.</li> </ul>	<b>Significant and Unavoidable</b>

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**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		GHG-2 For residential projects, all major appliances (e.g., dishwashers, refrigerators, clothes washers and dryers, and water heaters) provided/installed shall be Energy Star certified or of equivalent energy efficiency where applicable. Prior to the issuance of the certificate of occupancy, the City of Long Beach shall verify implementation of this requirement.	
Impact 5.6-2: Build out of the Specific Plan would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Significant and Unavoidable
<b>5.7 HAZARDS AND HAZARDOUS MATERIALS</b>			
Impact 5.7.1: Construction and operation of development accommodated by the Specific Plan could 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 and within one-quarter mile of an existing school site.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>5.8 HYDROLOGY AND WATER QUALITY</b>			
Impact 5.8-1: Construction and/or operation of the Specific Plan would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	Less than Significant	No mitigation measures are required.	Less than Significant

## 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.8-2: Construction and/or operation of the Specific Plan would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Specific Plan may impede sustainable groundwater management of the basin	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.8-3: Construction and/or operation of the Specific Plan would not 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 create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.8-4: Construction and/or operation of the Specific Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>5.9 LAND USE AND PLANNING</b>			
Impact 5.9-1: Implementation of the Specific Plan would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<b>5.10 NOISE</b>			
Impact 5.10-1: Construction activities would result in temporary noise increases in the vicinity of the Plan Area.	Potentially Significant	<p>N-1</p> <p>Prior to issuance of demolition, grading and/or building permits, the project applicant shall incorporate the following practices into the construction contract agreement to be implemented by the construction contractor during the entirety of all construction phases:</p> <ul style="list-style-type: none"> <li>• Per Section 8.80.202 of the Long Beach Municipal Code, construction activity is limited to the hours of 7:00 AM to 7:00 PM on Monday through Friday (including federal holidays), and 6:00 PM to 9:00 AM on Saturdays. Construction is prohibited on Sundays. If construction outside of these hours is necessary, special permits are required and must be issued by the City.</li> <li>• 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, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.</li> <li>• Require that impact tools (e.g., jack hammers and hoe rams) be 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, whenever feasible.</li> <li>• Stationary equipment such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.</li> <li>• Stockpiling shall be located as far as feasible from nearby noise-sensitive receptors.</li> <li>• 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 and residences at Century Villages at Cabrillo, 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</li> </ul>	<b>Significant and Unavoidable</b>

## 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>the City.</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Erect temporary noise barriers, where feasible, when construction noise is predicted to exceed the noise standard after other measures have been considered, or occur at nighttime, or when the anticipated construction duration is greater than is typical (e.g., two years or more).</li> </ul>	
Impact 5.10-2: Implementation of the Specific Plan would result in long-term operation-related noise that would not exceed local standards.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.10-3: Implementation of the Specific Plan would create short-term groundborne vibration that could exceed standards.	Potentially Significant	<p>N-2</p> <p>Prior to issuance of a building permit for any project requiring construction within 25 feet of an existing structure, the property owner/developer shall prepare a vibration analysis to assess and mitigate potential vibration impacts related to construction activities. Where construction equipment operates within the distances shown in Table 5.10-10 of a sensitive receptor, the project owner/developer must utilize best efforts to minimize duration and maximize distance between equipment and existing building(s). Exceeding the distances shown in the third column of the table would result in vibration levels greater than 0.20 in/sec PPV.</p>	<b>Significant and Unavoidable</b>

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation																																				
		<b>Table 5.10-10 Vibration Levels for Typical Construction Equipment</b>																																					
		<table><tr><th>Equipment</th><th>Distance at which threshold is exceeded (feet)</th><th>PPV in/sec at minimum distance allowable</th></tr><tr><td>Vibratory Roller</td><td>25</td><td>0.20</td></tr><tr><td>Clam shovel</td><td>15</td><td>0.19</td></tr><tr><td>Hoe Ram</td><td>15</td><td>0.19</td></tr><tr><td>Large Bulldozer</td><td>15</td><td>0.19</td></tr><tr><td>Caisson Drilling</td><td>13.5</td><td>0.19</td></tr><tr><td>Loaded Trucks</td><td>8</td><td>0.19</td></tr><tr><td>Jackhammer</td><td>1.5</td><td>0.20</td></tr><tr><td>Small Bulldozer</td><td>25</td><td>0.20</td></tr><tr><td>Vibroflot<sup>1</sup></td><td>42</td><td>0.20</td></tr><tr><td colspan="3">Sources: FTA, 2018. <i>Transit Noise and Vibration Impact Assessment</i>, September and Hamidi, Varaksin, &amp; Nikraz, 2011 <sup>1</sup> Maximum reference of 0.445 use to determine minimum allowable distance between receptor and equipment operation.</td></tr><tr><td colspan="3"></td></tr></table>		Equipment	Distance at which threshold is exceeded (feet)	PPV in/sec at minimum distance allowable	Vibratory Roller	25	0.20	Clam shovel	15	0.19	Hoe Ram	15	0.19	Large Bulldozer	15	0.19	Caisson Drilling	13.5	0.19	Loaded Trucks	8	0.19	Jackhammer	1.5	0.20	Small Bulldozer	25	0.20	Vibroflot <sup>1</sup>	42	0.20	Sources: FTA, 2018. <i>Transit Noise and Vibration Impact Assessment</i> , September and Hamidi, Varaksin, & Nikraz, 2011 <sup>1</sup> Maximum reference of 0.445 use to determine minimum allowable distance between receptor and equipment operation.					
		Equipment		Distance at which threshold is exceeded (feet)	PPV in/sec at minimum distance allowable																																		
		Vibratory Roller		25	0.20																																		
		Clam shovel		15	0.19																																		
		Hoe Ram		15	0.19																																		
		Large Bulldozer		15	0.19																																		
		Caisson Drilling		13.5	0.19																																		
		Loaded Trucks		8	0.19																																		
		Jackhammer		1.5	0.20																																		
		Small Bulldozer		25	0.20																																		
		Vibroflot <sup>1</sup>		42	0.20																																		
		Sources: FTA, 2018. <i>Transit Noise and Vibration Impact Assessment</i> , September and Hamidi, Varaksin, & Nikraz, 2011 <sup>1</sup> Maximum reference of 0.445 use to determine minimum allowable distance between receptor and equipment operation.																																					
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Significant and Unavoidable																																				
5.11 POPULATION AND HOUSING																																							
Impact 5.11-1: Implementation of the Specific Plan would not induce unplanned substantial population growth in in the City of Long Beach either directly or indirectly.	Less than Significant	No mitigation measures are required.	Less than Significant																																				
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant																																				



## 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<b>5.12 PUBLIC SERVICES</b>			
<b><i>FIRE PROTECTION AND EMERGENCY SERVICES</i></b>			
Impact 5.12-1: Development pursuant to the Specific Plan would introduce new dwelling units, residents, nonresidential uses, and workers into the LBFD's service boundaries, thereby increasing the requirement for fire protection facilities and personnel.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b><i>POLICE PROTECTION</i></b>			
Impact 5.12-2: Implementation of the Specific Plan would introduce new residential and nonresidential structures, residents, and workers into the LBPD service boundaries, thereby increasing the requirement for police protection services.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b><i>SCHOOL SERVICES</i></b>			
Impact 5.12-3: Development pursuant to the Specific Plan has the potential to result in the generation of 90 new students who would impact the school enrollment capacities of LBUSD schools that serve the Plan Area.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<b>LIBRARY SERVICES</b>			
Impact 5.12-4: Development pursuant to the Specific Plan would result in the generation of up to 2,100 additional residents in the Plan Area, which would lead to an increase in demand for local library services.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>5.13 RECREATION</b>			
Impact 5.13-1: Implementation of the Specific Plan would introduce additional residents in the Plan Area, which may lead to an increase in the use of existing City of Long Beach park and recreational facilities.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.13-2: Implementation of the Specific Plan's proposed recreational facilities needed to serve future project residents would not result in a significant environmental impact.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>5.14 TRANSPORTATION</b>			
Impact 5.14-1: Development pursuant to the Specific Plan would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.14-2: Development pursuant to the Specific Plan would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant

## 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<b>5.15 TRIBAL CULTURAL RESOURCES</b>			
Impact 5.15-1: Grading activities have the potential to encounter unknown, buried tribal cultural resources.	Potentially Significant	<p>TCR-1 Prior to the issuance of any grading permit, the City of Long Beach Development Services Department shall ensure that the construction contractor provide access for Native American monitoring during ground-disturbing activities. This provision shall be included on project plans and specifications. The site shall be made accessible to any Native American tribe requesting to be present, provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur.</p> <p>TCR-2 Should a potential TCR be encountered and no monitors are present, construction activities near the encounter shall be temporarily halted within 50 feet of the discovery and the City notified. The City will notify Native American tribes that have been identified by the Native American Heritage Commission to be traditionally and culturally affiliated with the geographic area of the Proposed Project. If the City determines that the potential resource is a TCR (as defined by PRC, Section 21074), tribes consulting under AB 52 and SB 18 would be provided a reasonable period of time, typically 5 days from the date a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities, as well as the treatment and disposition of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and shall consider the recommendations of the tribe(s). Implementation of proposed recommendations will be made based on the determination of the City that the approach is reasonable and feasible. All activities shall be conducted in accordance with applicable regulatory requirements.</p> <p>TCR-3 <b>Native American Monitor/Consultant.</b> The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both approved by the Gabrieleno Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the area of the project location. This list is provided by the NAHC. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground</p>	Less than Significant

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>disturbing activities are defined by the Gabrieleno Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the Plan Area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Plan Area grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.</p> <p>TCR-4 <b>Unanticipated Discovery of Tribal Cultural and Archaeological Resources.</b> Upon discovery of any archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant approved by the Gabrieleno Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleno Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request reburial or preservation for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 (f)). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the</p>	

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to a local school or historical society in the area for educational purposes.</p> <p>TCR-5 <b>Unanticipated Discovery of Human Remains and Associated Funerary Objects.</b> Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) and PRC 5097.98 shall be followed.</p> <p>TCR-6 <b>Resource Assessment &amp; Continuation of Work Protocol.</b> Upon discovery, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the burial. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).</p> <p>TCR-7 <b>Kizh-Gabrieleno Procedures for Burials and Funerary Remains.</b> If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the following treatment measures shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the burial of funerary objects with the deceased, and the ceremonial burning of human</p>	

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>remains. These remains are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.</p> <p>TCR-8 <b>Treatment Measures.</b> Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive diagnostics on human remains.</p> <p>Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the</p>	

## 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Plan Area but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.	
		TCR-9 <b>Professional Standards.</b> Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.	
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>5.16 UTILITIES AND SERVICE SYSTEMS</b>			
<b>WASTEWATER TREATMENT AND COLLECTION</b>			
Impact 5.19-1: Existing wastewater infrastructure and treatment facilities would be able to accommodate project-generated wastewater demands.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b>WATER SUPPLY AND DISTRIBUTION SYSTEMS</b>			
Impact 5.19-2: Existing water infrastructure and treatment facilities would be able to accommodate project-generated water demands.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.19-3: Available water supplies are sufficient to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	Less than Significant	No mitigation measures are required.	Less than Significant

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b><i>STORM DRAINAGE SYSTEMS</i></b>			
Impact 5.19-4: Existing storm drain facilities would be able to accommodate project-generated storm water flows.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b><i>SOLID WASTE</i></b>			
Impact 5.19-5: Project-generated solid waste would not be 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	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant
<b><i>OTHER UTILITIES</i></b>			
Impact 5.19-6: Existing facilities would be able to accommodate project-generated electricity and gas demands.	Less than Significant	No mitigation measures are required.	Less than Significant
Cumulative Impacts	Less than Significant	No mitigation measures are required.	Less than Significant



## 2. Introduction

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### 2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. This Draft Environmental Impact Report (DEIR) has been prepared to satisfy CEQA and the CEQA Guidelines. The Environmental Impact Report (EIR) is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce and/or avoid environmental damage and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided, growth inducing impacts, effects not found to be significant, and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

Pursuant to CEQA Guidelines § 15367 and Public Resources Code (PRC) § 21067, the lead agency is “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment”. The City of Long Beach (“City”) has the principal responsibility for approval of the Century Villages at Cabrillo Specific Plan (Specific Plan). For this reason, the City of Long Beach is the CEQA lead agency for the Specific Plan.

The intent of the DEIR is to provide sufficient information on the potential environmental impacts of the Specific Plan to allow the City to make an informed decision regarding approval of the project. Specific discretionary and non-discretionary actions to be reviewed by the City are described in Section 3.5, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (PRC §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, §§ 15000 et seq.)

The overall purpose of this DEIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the implementation of the Specific Plan and future development that would be accommodated by the Specific Plan. This DEIR addresses effects that may be significant and adverse; evaluates alternatives to the project; and identifies mitigation measures to reduce or avoid adverse effects.

## 2. Introduction

### 2.2 NOTICE OF PREPARATION AND INITIAL STUDY

The City determined that an EIR would be required for the Specific Plan and issued a Notice of Preparation (NOP) and Initial Study in January 2020 (Appendix A). Comments received during the Initial Study's public review period, from January 28 to February 26, 2020, are in Appendix B. Table 2-1 summarizes the comment letters received from commenting agencies/persons during the NOP process and identifies the section(s) of the DEIR where the issues are addressed.

**Table 2-1 NOP Written Comments Summary**

Commenting Agency/Person	Letter Dated	Summary of Comments	Issue Addressed In:
<b>Agencies</b>			
State of California Governor's Office of Planning and Research (OPR)	January 27, 2020	<ul style="list-style-type: none"> <li>Release of NOP and confirmation that NOP and accompanying Initial Study were routed to state agencies for review</li> </ul>	<ul style="list-style-type: none"> <li>Section 2, <i>Introduction</i></li> </ul>
Native American Heritage Commission (NAHC)	January 28, 2020	<ul style="list-style-type: none"> <li>Details NAHC's role and laws pertinent to analyzing impacts to tribal cultural resources, along with the requirements of Native American consultation pursuant to Assembly Bill 52 and Senate Bill 18.</li> <li>Provides recommendations for cultural resource assessments</li> </ul>	<ul style="list-style-type: none"> <li>Section 5.3, <i>Cultural Resources</i></li> <li>Section 5.14, <i>Tribal Cultural Resources</i></li> </ul>
South Coast Air Quality Management District (SCAQMD)	February 11, 2020	<ul style="list-style-type: none"> <li>Provides direction for submittal of technical documents related to air quality, health risk, and greenhouse gas analyses.</li> <li>Recommends methodology and compliance with SCAQMD's CEQA Handbook.</li> <li>Outlines concerns about potential public health impacts of residents from being near a high-volume freeway.</li> <li>Provides guidance regarding residences sited near a high-volume freeway or other sources of air pollution.</li> <li>Provides methodology and guidance for preparing health risk assessments.</li> <li>Recommends resources for identifying mitigation measures and health risk reduction strategies.</li> </ul>	<ul style="list-style-type: none"> <li>Section 5.2, <i>Air Quality</i></li> <li>Section 5.7, <i>Greenhouse Gas Emissions</i></li> <li>Appendix C</li> </ul>
California Department of Transportation (Caltrans)	February 26, 2020	<ul style="list-style-type: none"> <li>Notes that Senate Bill 743 and CEQA law mandate that review of transportation impacts of proposed developments use vehicle miles traveled as the primary metric in identifying transportation impacts after the July 1, 2020 statewide implementation date.</li> <li>Provides guidance for preparation of a traffic study and supporting documentation, including outlining mitigation measures appropriate to alleviate anticipated traffic impacts.</li> <li>Recommends the incorporation of multi-modal and complete streets transportation elements into the project.</li> <li>Encourages the City to evaluate the potential of Transportation Demand Management strategies</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 3, <i>Project Description</i></li> <li>Section 5.10, <i>Noise</i></li> <li>Section 5.14, <i>Transportation</i></li> </ul>

## 2. Introduction

Table 2-1 NOP Written Comments Summary

Commenting Agency/Person	Letter Dated	Summary of Comments	Issue Addressed In:
		and Intelligent Transportation System applications in order to better manage the transportation network. <ul style="list-style-type: none"> <li>• Outlines concerns about traffic impacts on state facilities and provides guidance on analyzing impacts to such facilities.</li> <li>• States that traffic noise from the adjacent freeway may negatively impact project residents and therefore should be fully analyzed and mitigated.</li> </ul>	
Sanitation Districts of Los Angeles County (LACSD)	March 2, 2020	<ul style="list-style-type: none"> <li>• Provides information on existing wastewater facilities and flow and the expected flow that would be generated by the Specific Plan.</li> <li>• Provides information on wastewater connection fees.</li> </ul>	<ul style="list-style-type: none"> <li>• Section 5.16, <i>Utilities and Service Systems</i></li> </ul>

Source: Appendix B of the DEIR.

A public scoping meeting was held during the NOP's 30-day public review period, on February 5, 2020 at 5:00 PM at the Century Villages at Cabrillo Social Hall, 2001 River Avenue, Long Beach, California. The purpose of the scoping meeting was to solicit comments and concerns of interested parties regarding the Specific Plan. Environmental issues and concerns raised during the scoping meeting included air quality, building density and massing, noise and vibration, pedestrian accessibility, traffic, and water quality; all of which are fully addressed in the respective topical sections of Chapter 5 of this DEIR.

The NOP and public scoping process help determine the scope of the environmental issues to be addressed in the DEIR. Based on this process and the Initial Study for the Specific Plan, certain environmental categories were identified as having the potential to result in significant impacts. Issues considered Potentially Significant are addressed in this DEIR, but issues identified as Less Than Significant or No Impact are not. Refer to the Initial Study in Appendix A for discussion of how these initial determinations were made.

## 2.3 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on the City's Initial Study, comments received in response to the NOP, and comments received at the scoping meeting conducted by the City. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, the DEIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance.

The information in Chapter 3, *Project Description*, establishes the basis for analyzing future, project-related environmental impacts. However, further environmental review by the City may be required as more detailed information and plans are submitted on a project-by-project basis.

## 2. Introduction

### 2.3.1 Impacts Considered Less Than Significant

During preparation of the Initial Study, the City determined that four environmental impact categories were not significantly affected by or did not affect the Specific Plan. These categories are not discussed in detail in this DEIR:

- Agriculture and Forestry Resources
- Biological Resources
- Mineral Resources
- Wildfire

### 2.3.2 Potentially Significant Adverse Impacts

The City determined that 16 environmental factors have potentially significant impacts if the Specific Plan is implemented:

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

### 2.3.3 Unavoidable Significant Adverse Impacts

This DEIR identifies three significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the Specific Plan:

- Air Quality
- Greenhouse Gas Emissions
- Noise

## 2. Introduction

Unavoidable adverse impacts may be considered significant on a project-specific basis, cumulatively significant, and/or potentially significant. Before it can approve the project, the City must prepare a “statement of overriding considerations”, attesting that the decision-making body has balanced the benefits of the proposed project against its unavoidable significant environmental effects and has determined that the benefits outweigh the adverse effects, with the identified adverse effects considered to be acceptable.

### 2.4 INCORPORATION BY REFERENCE

Consistent with Section 15150 of the CEQA Guidelines, some documents are incorporated by reference into this DEIR; they are available for review upon request at the City of Long Beach Development Services, Planning Counter, 411 W. Ocean Boulevard, 2nd Floor, Long Beach, CA.

- City of Long Beach General Plan
- City of Long Beach Municipal Code

In each instance where a document is incorporated by reference for purposes of this report, the EIR shall briefly summarize the incorporated document or briefly summarize the incorporated data if the document cannot be summarized. Chapter 13, *Bibliography*, provides a complete list of references utilized in preparing this DEIR.

### 2.5 FINAL EIR CERTIFICATION

This DEIR is being circulated for public review for 45 days pursuant to CEQA Guidelines § 15105 and PRC § 21091. Interested agencies and members of the public are invited to provide written comments on the DEIR to the City address shown on the title page of this document. The DEIR is available to the general public for review at various location:

- City of Long Beach Website: <http://www.longbeach.gov/lbds/planning/environmental/reports/>

Upon completion of the 45-day review period, the City of Long Beach will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to the City for potential certification as the environmental document for the project. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearings before the Long Beach Planning Commission and City Council.

### 2.6 MITIGATION MONITORING

PRC § 21081.6 requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code Section 21081 or adopted a Negative Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration. The Mitigation Monitoring and Reporting Program for the Specific Plan will be completed as part of the FEIR, prior to consideration of the project by the Long Beach City Council.

## 2. Introduction

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## 3. Project Description

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### 3.1 PROJECT LOCATION

Figures 3-1, *Regional Location*, and 3-2, *Local Vicinity*, and 3-3, *Aerial Photograph*, show the location of the Century Villages at Cabrillo Specific Plan development area (Plan Area) within the regional and local contexts of the City of Long Beach (City). The Plan Area encompasses 27 acres within a portion of the former United States Naval housing facility at 2001 River Avenue in a highly urbanized area on the western edge of the City. It is approximately 2.5 miles northwest of Long Beach's downtown core, and the Ports of Long Beach and Los Angeles are to the south. As shown in Figure 3-3, the Plan Area is bordered by Cabrillo High School and associated campus facilities to the north and east; California State Long Beach Technology and industrial uses (warehouse, distribution and logistics) to the south; California State Long Beach Job Corp's Center to the east; and warehouse, distribution and logistics uses to the west, across State Route 103 (SR-103, also known as Terminal Island Freeway). The San Pedro Branch railroad and Southern California Edison's electricity transmission corridor are also to the west, across SR-103. The Ports of Long Beach and Los Angeles are south.

Regional access to the Plan Area is provided by SR-1 (also known as Pacific Coast Highway), SR-103, and Interstate 710 (I-710). SR-1 runs east-west and SR-103, located near the western boundary of the Plan Area, and I-710 both run in a north-south direction.

### 3.2 STATEMENT OF OBJECTIVES

The Specific Plan includes principals and goals to guide future development, programming and improvements that will occur in the Plan Area over the next 10 years (early 2023 to 2033). Based on these guiding principles and goals, the following objectives have been established for the proposed project and will aid decision makers in their review of the project and associated environmental impacts.

1. Integrate both new and rehabilitated residential development for the express purpose of providing transitional housing and support services to homeless veterans and the homeless population of the region.
2. Allow for the long-term development and enhancement of the Century Villages at Cabrillo community to anchor residents, meet the evolving needs of the community and provide necessary support of resident's mental, physical, and emotional health.
3. Enhance the safety, livability, and connectivity of the Century Villages at Cabrillo community.
4. Guide redevelopment of an antiquated building stock and available land in order to accommodate increased demand for housing and services, while increasing energy efficiency.

### 3. Project Description

5. Develop enhanced and expanded open space and connectivity throughout the community to serve the needs of residents and employees.
6. Provide housing and services near the West Long Beach Transit Center and within a transit priority area consistent with Statewide and regional goals to reduce vehicle miles traveled.
7. Enhance the continued fiscal health, viability, and success of the Century Villages at Cabrillo community.

### 3.3 PROJECT BACKGROUND

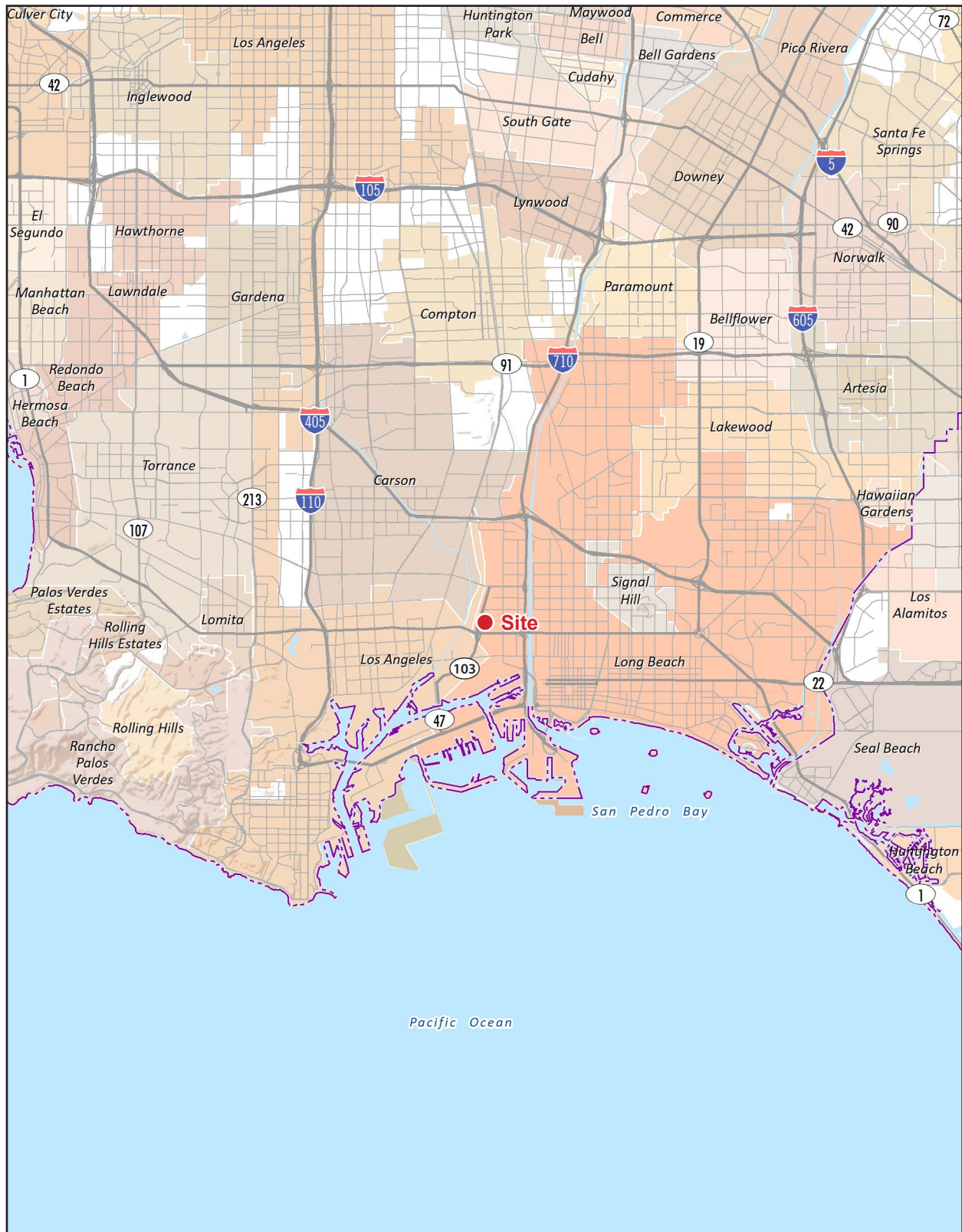
The Plan Area, which today is home to the Century Villages at Cabrillo (CVC) community, had been part of a larger naval housing complex serving the Navy's shipyards starting in the 1950s and was closed in 1991 as part of the US Department of Defense's (DoD) Base Realignment and Closure Commission. In 1997, DoD transferred the land under the McKinney-Vento Homeless Assistance Act (McKinney Act), which makes unused federal properties available to assist homeless persons. The Plan Area was conveyed to primarily benefit the homeless and was part of the larger 140-acres of federal property that was included in the Long Beach Naval Station decommissioning. A 501(c)3 nonprofit organization, Villages at Cabrillo was established in 1997 when DoD transferred the 27 acres of land that make up the Plan Area to CVC for the purpose of providing transitional and permanent housing to the homeless and those at risk of becoming homeless.

When CVC originally opened in 1997, the facility primarily utilized rehabilitated former navy housing with new construction introduced over time. By the end of 2018, the entirety of CVC had been redeveloped with new residential uses or rehabilitation of existing structures. Major redevelopment of CVC occurred over six phases. Over these six phases, former Naval housing and facilities were either rehabilitated or removed for new construction. A total of 865 dwelling units, 54,730 nonresidential square feet, and 512 parking spaces exist within the Plan Area.

- **Phase 1, completed in 2011.** Community-based outpatient clinic, childcare center, transitional school facilities, family shelter, housing for families, youth and veterans, a central kitchen and dining facility and a career center and computer lab. This first phase primarily focused on the rehabilitation and reuse of existing structures on the campus.
- **Phase 2, completed in 2004.** Casa de Cabrillo, a permanent housing project for single veterans. The improvements also included the parking lot north of Casa de Cabrillo as well as the construction of North and West Willard Streets.
- **Phase 3, completed in 2009.** Family Commons at Cabrillo, an 81-unit affordable housing apartment complex designed specifically for families. In early 2012, CVC completed a new 14-unit emergency shelter that expanded an existing shelter and provides emergency housing to families for up to 45 days.
- **Phase 4, completed in 2014.** Cabrillo Gateway housing includes 80 permanent support homes for families. Also included during this phase was renovation of the Urban Forest, Solar Shed, and new Facilities Maintenance Building.



Figure 3-1 - Regional Location  
3. Project Description



Note: Unincorporated county areas are shown in white.

Source: ESRI, 2019

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Scale (Miles)



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### 3. Project Description

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Figure 3-2 - Local Vicinity  
3. Project Description



--- Plan Area Boundary  
--- City Boundary

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Scale (Feet)



Source: ESRI, 2019

### 3. Project Description

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Figure 3-3 - Aerial Photograph  
3. Project Description



### 3. Project Description

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### 3. Project Description

- **Phase 5, completed in 2018.** Anchor Place, a 120-unit apartment building that includes housing for 75 homeless veterans. This phase also included rehabilitation of the CVC Social Hall.
- **Phase 6, approved on May 27, 2020.** The City of Long Beach approved a 90-unit veteran-targeted affordable housing complex at 2221 West Williams Street.

Since being established, CVC has developed into a unique supportive housing community that provides housing on any given night to over 1,500 persons. These include veteran and non-veteran individuals, families, youth, and children who are housed within CVC's robust continuum of supportive housing, ranging from shelter, to transitional housing, to permanent housing. CVC is a community in transition as the initial housing stock consisted of the rehabilitated structures from the Naval housing make up half of the community while newer development has infilled the other half.

## 3.4 PROJECT DESCRIPTION

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

Implementation of the project requires a zoning ordinance amendment, zoning map amendment, and adoption of the Century Villages at Cabrillo Specific Plan (Specific Plan). Following is a detailed description of the Specific Plan and the various elements and improvements that will be implemented as a part of the Specific Plan.

### 3.4.1 Zoning Ordinance Amendment

An amendment to the Long Beach Zoning Ordinance is required to replace the existing Planned Development District 31 (PD-31), Subarea D, zoning designation of the Plan Area with the new Century Villages of Cabrillo Specific Plan. The amendment will state that the regulating code contained in the Specific Plan will serve as the regulatory plan (zoning, development, and design standards and guidelines) for all development projects and improvements in the Plan Area. The Zoning Ordinance amendment is consistent with the General Plan designation for the Plan Area, and thus no General Plan amendment is required as part of the project.

### 3.4.2 Zoning Map Amendment

A zoning map amendment is required to change the zoning designation from PD-31, Subarea D to Century Villages at Cabrillo Specific Plan.

### 3.4.3 Specific Plan

Over the next 10 years (early 2023 to 2033), the project applicant (Century Housing Corporation) is seeking to redevelop portions of the Plan Area that consist of the former navy housing stock, transitioning the collection



### 3. Project Description

of antiquated structures and underutilized areas to modern affordable housing and service facilities along with key site improvements. The redevelopment effort will be realized through implementation of the Specific Plan, which guide the services, housing, amenities, and programming for the Plan Area. The mix of development accommodated by the Specific Plan will provide quality dwelling units for residents in need while hosting modern spaces for current and new social service providers, commercial uses, and community amenities. The Specific Plan serves as the master plan for a residential community that includes emergency, bridge/transitional, and permanent housing with support services and amenities. The Specific Plan regulates the Plan Area's allowable land use, circulation, open space, and development standards, and provides the basis for the Leadership in Environmental and Energy Design (LEED)–Neighborhood Development (ND) certification documentation obtained by CVC in 2019.

The California Government Code (Title 7, Division 1, Chapter 3, Article 8, Sections 65450–65457 [Specific Plans]) provides authority for a local jurisdiction to adopt a specific plan by ordinance (as a regulatory plan) or resolution (as a policy plan). When a specific plan is adopted by ordinance, the specific plan effectively replaces portions or all of the current zoning regulations for specified parcels and becomes an independent set of zoning regulations that provide specific direction to the type and intensity of uses permitted or define other types of design and permitting criteria. The Specific Plan will be adopted by ordinance and function as the regulatory plan that serves as the implementing zoning for the Plan Area, thereby, ensuring the orderly and systematic implementation of the Long Beach General Plan, as well as the Plan Area.

#### 3.4.3.1 PROPOSED BUILDOUT AND LAND USES

Implementation of the Specific Plan involves the demolition of 235 dwelling units, 10,030 square feet of amenities (such as convenience stores, cafeteria, weight room, faith services, etc.), 10,200 square feet of educational uses, and 7,250 square feet of administrative and support services, and removal of 153 parking spaces. As shown in Figure 3-4, *Proposed Development Plan*, the majority of buildings that will be demolished are along Williams Streets and toward the north end of San Gabriel Avenue. New development under the Specific Plan will include 750 dwelling units, 77,000 square feet of amenities, 15,000 square feet of educational uses, 17,000 square feet of commercial/retail uses, 48,000 square feet of administrative and supportive services, and 518 parking spaces. As shown in Table 3-1, buildout of the Plan Area under the Specific Plan will result in a total of 1,380 dwelling units, 79,350 square feet of amenities, 15,000 square feet of educational uses, 22,850 square feet of commercial/retail uses, 67,050 square feet of administrative and supportive services, and 877 parking spaces.

The existing and proposed buildings will range between 15 and 80 feet in height and will be arranged around a series of outdoor spaces and community amenities. Each new development accommodated by the Specific Plan will have residential units on the upper levels and ground floors occupied by consolidated bike and automobile parking, along with flexible spaces that can host service providers, administrative functions, and community amenities. New buildings will have similar unit mixes to that of Cabrillo Gateway and Anchor Place, including housing for veterans and nonveterans. New residential development will replace aging dwelling units while expanding affordable housing options for veterans, non-veterans, families, and individuals.



### 3. Project Description

As shown in Figure 3-4, *Proposed Development Plan*, the majority of new development accommodated by the Specific Plan will occur along the central and in the northwestern portions of the Plan Area, along Williams Streets and toward the north end of San Gabriel Avenue.

**Table 3-1 Summary of Proposed Land Uses**

	Existing	Remove	Remain	Proposed	Buildout (Remain + Proposed)
<b>Land Use</b>					
<i>Residential</i>					
Residential Units	865 DU	235 DU	630 DU	750 DU	1,380 DU
Total Residential SF	580,340	98,560	481,780	1,301,597	1,783,377
<i>Nonresidential</i>					
Amenities	12,380 SF	10,030 SF	2,350 SF	77,000 SF	79,350 SF
Education	10,200 SF	10,200 SF	0 SF	15,000 SF	15,000 SF
Commercial/Retail	5,850 SF	0 SF	5,850 SF	17,000 SF	22,850 SF
Services/Administration	26,300 SF	7,250 SF	19,050 SF	48,000 SF	67,050 SF
Total Nonresidential SF	54,730	27,480	27,250	157,000	184,250
<b>Total SF</b>	<b>635,070 SF</b>	<b>126,040 SF</b>	<b>509,030 SF</b>	<b>1,458,597 SF</b>	<b>1,967,627 SF</b>
<b>Parking</b>					
Commercial/Retail	73 PS	35 PS	38 PS	126 PS	164 PS
Services/Administration	6 PS	0 PS	6 PS	17 PS	23 PS
Blended Residential	433 PS	118 PS	315 PS	375 PS	690 PS
<b>Total Parking Required</b>	<b>511 PS</b>	<b>152 PS</b>	<b>359 PS</b>	<b>518 PS</b>	<b>877 PS</b>
<b>Total Parking Provided</b>	<b>520 PS</b>	<b>155 PS</b>	<b>365 PS</b>	<b>510 PS</b>	<b>875 PS</b>
Notes: DU=dwelling units; SF=square feet; PS=parking spaces					

Implementation of the Specific Plan will continue to serve the Plan Area's existing and future residents while upgrading and expanding the housing stock to address community needs. Dedicated veteran housing will continue to be the core offering with the initial phases of development focusing on replacing these units and upgrading the associated services and amenities. Housing dedicated for special needs individuals and seniors will also be part of the Specific Plan with new facilities for service providers that are not currently operating in the Plan Area. Some existing amenities will be realigned to better serve the intended populations while new contemplated amenities such as a dedicated senior center will be developed for the future population.

#### 3.4.3.2 LAND USE DISTRICTS

The Specific Plan is divided into two main land use districts: Village Core and Village General, as shown in Figure 3-5, *Land Use Districts*. Village Core, centrally located in the Plan Area, will be developed with more active uses closer to the existing CVC Transit Center and main entrance while Village General will primarily serve as multi-family residential uses along with amenities, services, and administrative uses. The Village Core is where the primary administrative functions, commercial uses, and social spaces will occur. The Village Core will have more intensive functions and denser development while the uses will be more passive and development lower in scale toward the outer edges of the community within the Village General. The differences in the Village

### 3. Project Description

Core and Village General land use districts are also reflected in the allowable building heights and maximum floor area ratios, which are discussed in Section 3.4.3.4, *Development Standards*.

#### 3.4.3.3 URBAN STRATEGIES

The Specific Plan includes four urban design strategies (Strengthen Linkages, Expand Hierarchy, Improve Efficiencies, and Productive Landscape) to help facilitate future development of the Plan Area. The Strengthen Linkages strategy focuses on improving connectivity by standardizing streets, connecting walkway and bicycle networks, and extending the transit system. The Expand Hierarchy strategy emphasizes strengthening the orientation, reinforcing building frontages, and organizing open spaces to maintain and enhance the sense of community. The Improve Efficiencies strategy focuses on consolidating parking, increasing building height, and developing buildings with multiple functions to sustain growth and change in a built-out neighborhood. The Productive Landscape strategy emphasizes developing a harmonious and healthy mixed-use neighborhood by relocating sensitive uses, expanding landscapes and gardens, and developing infrastructure for sustainable water management and energy conservation and production.

#### 3.4.3.4 DEVELOPMENT STANDARDS

The development standards in the Specific Plan provide regulatory guidance for new development projects to ensure that they meet a high standard of design and provide quality environments for residents, workers and visitors, while providing necessary flexibility for the programming and design of public and private investment in the Plan Area. For example, the Specific Plan provides guidance as to the types of uses allowed in the Plan Area, balancing the need to ensure a harmonious mix of uses, with flexibility to adapt to the evolving needs of the community. Allowable uses generally include a variety of residential programs, social and clinical services, administrative applications, and neighborhood-serving commercial uses. Refer to Table 4.6A, Permitted Uses, of the Specific Plan for a detailed list of permitted uses.

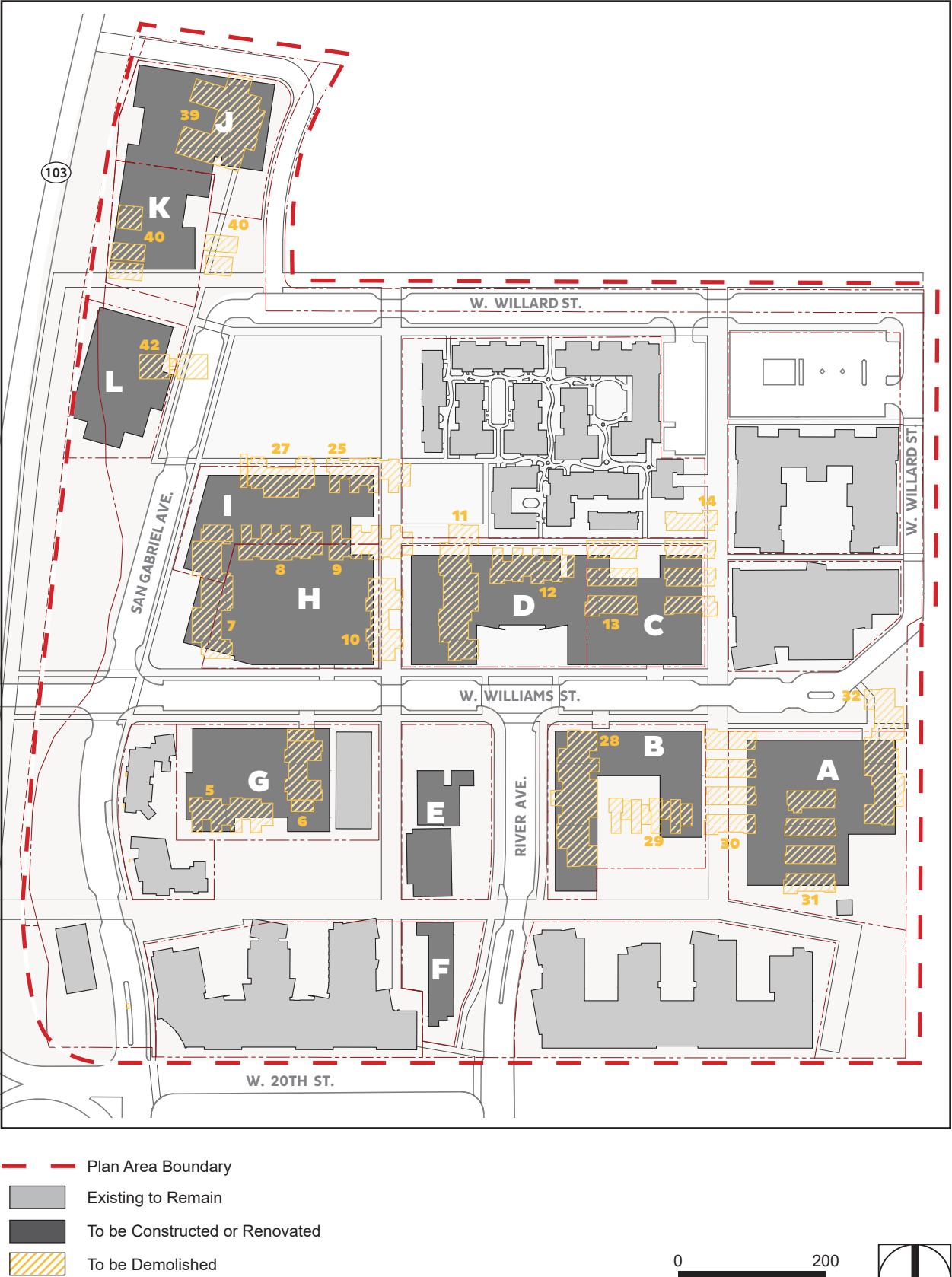
Development intensity for the Plan Area is guided by maximum floor area ratio and building heights, as shown in Table 3-2. The building heights correspond to those described in the LEED-ND certification documentation obtained by CVC to create consistent urban edges throughout the Plan Area.

**Table 3-2 Development Intensity Standards**

	Village Core	Village General
Floor Area Ratio	4.0	3.0
Maximum Building Height	80 feet; 7 stories	60 feet; 5 stories
Minimum Lot Size	5,000 SF	5,000 SF
Minimum Dwelling Units Size	200 SF	200 SF

Building placement in the Plan Area will be guided by the setbacks outlined in Table 3-3. Setbacks are measured from the back of the sidewalk, which is generally the development parcel boundary. Setbacks of new buildings will be consistent with the existing adjacent structures. Setbacks are not required for ground floor commercial uses and community amenities within the Village Core, but they are required for ground-floor residential units within the Plan Area. See Figure 3-4 for proposed building placement.

Figure 3-4 - Proposed Development Plan  
3. Project Description

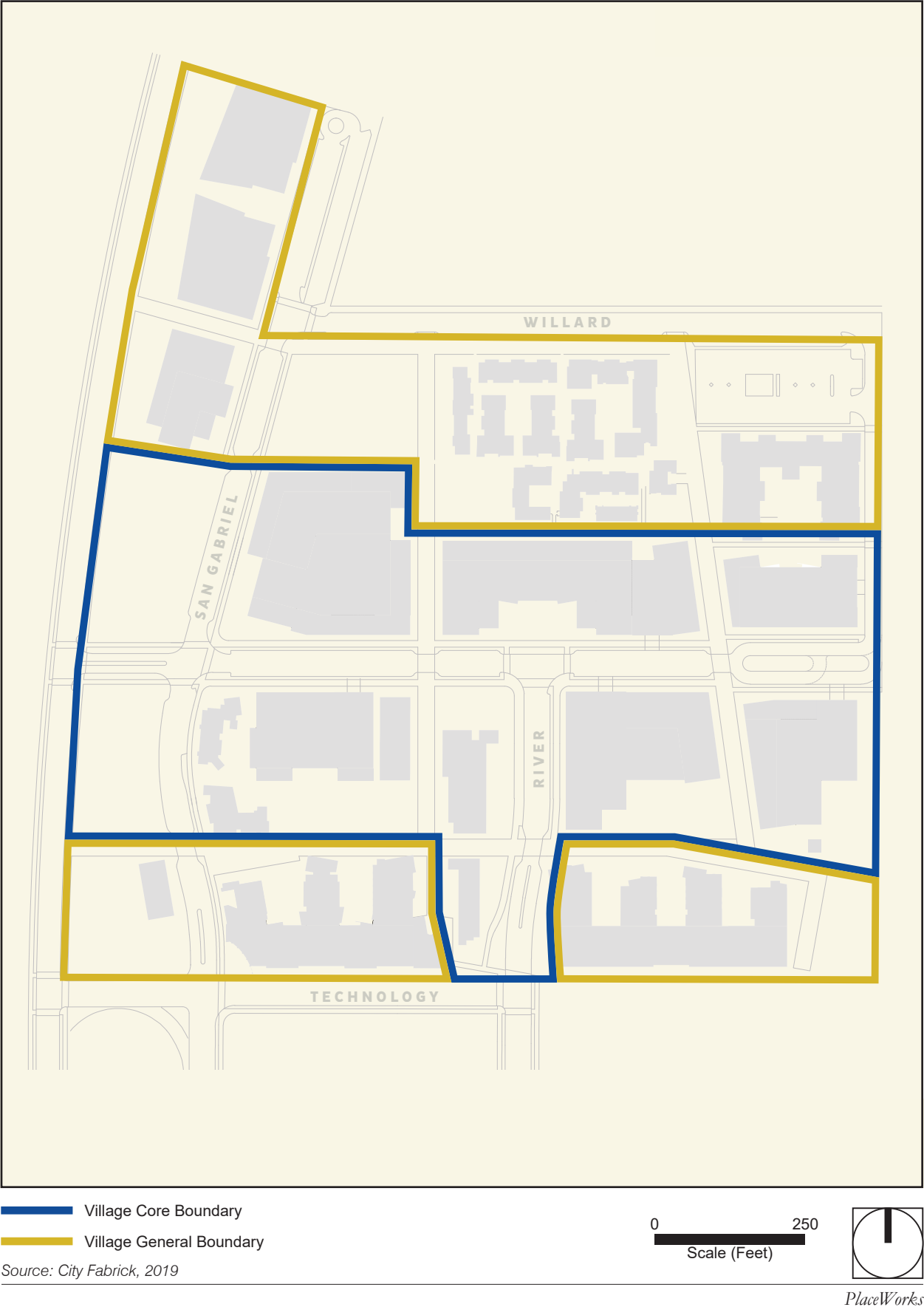


Source: City Fabrick, 2021

### 3. Project Description

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Figure 3-5 - Land Use Districts  
3. Project Description



### 3. Project Description

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### 3. Project Description

**Table 3-3 Building Placement**

	Minimum	Maximum
Build-to Line/Setback <sup>1</sup>		
Street <sup>2</sup>	5 feet	15 feet
Wellness Trail	10 feet	20 feet
Alley <sup>3</sup>	20 feet	None
Open Space	5 feet	25 feet
Adjacent Property	10 feet	None

1. Setbacks are measured from the closest point of a building to the assumed property line, unless otherwise stated. This is typically the back of sidewalk.

2. Up to 20 percent of the building frontage may be set back more than 5 feet.

3. Setbacks are measured from the centerline of alley.

#### 3.4.3.5 DESIGN GUIDELINES

Design guidelines are included in the Specific Plan to regulate building form and design, frontages and urban edges, open space and landscaping, parking areas, signage and wayfinding, outdoor lighting, and environment sustainability. The design guidelines are intended to promote quality design, consistent with the overall Specific Plan vision, while providing a level of flexibility to encourage creative design. For example, the designs guidelines call for the ground floor level of buildings to be developed with a higher ceiling to create flexibility to accommodate a variety of uses; open spaces to be designed to avoid barriers and allow for accessibility to all residents of the Plan Area; the design of parking, utilities and service functions to be minimized to enhance walkability of the Plan Area. Additionally, the LEED–ND certification provides detailed guidance for the Specific Plan in relation to circulation, density, building placement, and transportation management.

#### 3.4.3.6 AMENITIES AND OPEN SPACE

The Specific Plan identifies new and enhanced amenities for current and future residents of the Plan Area. Some of the existing amenities will be realigned to better support the specific populations, like relocating the Preschool and Oasis Center around the Play Garden in the southeast corner of the Plan Area as part of the South Williams Buildings. Other new community amenities (such as convenience stores, cafeteria, weight room, faith services, etc.) will be developed to accommodate the growing need, including converting the Oasis Center [after relocation] into a dedicated senior center, which will anchor the Veterans Garden between the North Williams and Casa de Cabrillo, near the existing Savannah Housing, which will be replaced.

The Plan Area currently has approximately 0.11 acres (5,000 square feet) of play area that would be available to future residents. The play area consists of playground, mural, shade structures, tetherball, and other amenities. Under the open space requirements of the Specific Plan, the additional 750 dwelling units accommodated by the Specific Plan would result in the provision of 3.44 acres (150,000 square feet) of new open space—75,000 square feet of outdoor common residential open space, 37,500 square feet of indoor common residential open space, and 37,500 square feet of private residential open space. Open spaces shown in Figure 3-6, *Open Space Network*, demonstrate intended distribution and relationships of such spaces throughout the Plan Area. The open space network is designed to transition from the most public to most private with appropriate levels of activity and access. The exact configuration and location of open spaces will be established as part of each development.

### 3. Project Description

Examples of new and reconfigured open space and amenities include Casa de Cabrillo's open courtyard, which will be expanded and more clearly defined as part of the construction of North Williams Building A. Family Commons will be consolidated around a series of more intimate courtyards. The Zocalo will provide a civic plaza while the Town Square will be the center of commerce. The KaBoom! playground will be relocated to the existing basketball courts adjacent to the community center as part of the initial development of the North San Gabriel development. The gymnasium developed as part of the Willard Buildings will anchor the sports plaza, which consolidates existing courts while providing more options for organized sports. The concept of a gym onsite is to enhance indoor recreational opportunities for CVC residents. Additionally, the space could double as large indoor event/gathering space. Ideally, these improvements will coincide with the potential future replacement of the Terminal Island Freeway with a local road and greenbelt as envisioned in the Green TI Plan.<sup>1</sup> The enclosed gymnasium and expanded urban forest will remain along the western edge of the community.

#### 3.4.3.7 INFRASTRUCTURE PLANS AND UTILITY SYSTEMS

The Specific Plan includes infrastructure plans and utility systems that are necessary to serve existing development and future development that will be accommodated by the Specific Plan, including plans for mobility, drainage, water, wastewater, dry utilities (electricity, natural gas, and telecommunication services). Following is a description of the infrastructure plans and utility systems needed to serve the Plan Area.

##### Mobility Plan

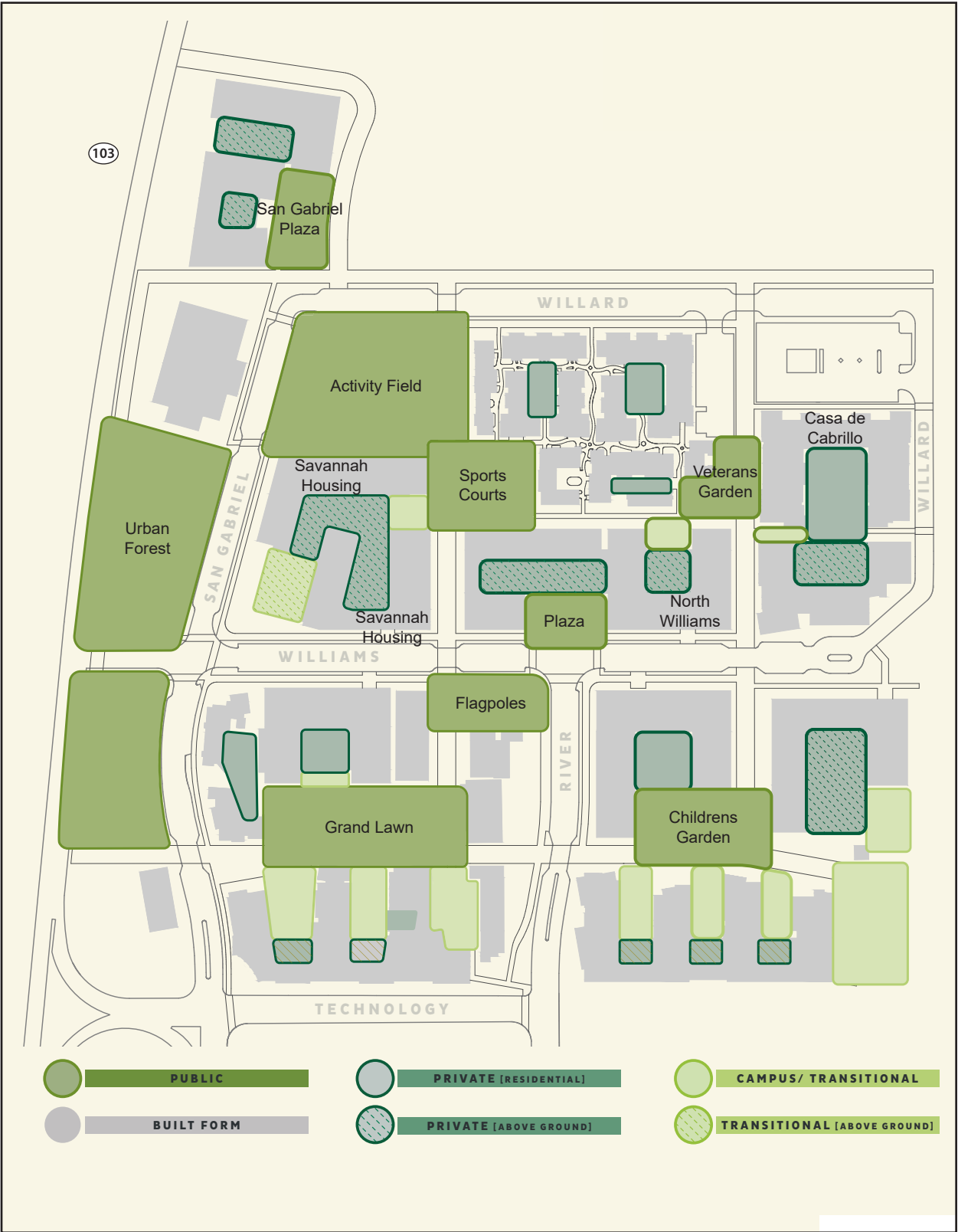
Existing and future residents of the Plan Area will be provided with a variety of mobility options on- and offsite, some of which already exist and will be expanded or enhanced under the Specific Plan. Internal streets and walking paths will be reconfigured and redesigned to improve vehicular and nonvehicular (active transportation) mobility throughout the Plan Area. The primary basis for the Plan Area's future mobility network emphasizes biking and walking as the primary modes of transportation within the Plan Area and public transit beyond. Automobile movement in the Plan Area will become more efficient while transitioning to be secondary to the active transportation network. Existing and future residents of the Plan Area will also have access to public transportation provided by Long Beach Transit, which provides direct service within the Plan Area. Figure 3-7, *Street Classification Plan*, shows the Plan Area's street classifications, Figure 3-8, *Neighborhood Connections*, shows the Plan Area's nonvehicular network, and Figure 3-9, *Local and Regional Transit Service*, shows the local and regional public transportation routes serving the Plan Area. In addition, the Specific Plan includes transportation demand management (TDM) measures to further reduce parking demand and VMT, such as employee flexible work programs, subsidized transit passes, and carpool/carshare programs.

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<sup>1</sup> The City of Long Beach developed and adopted the Green TI Plan in 2015, a plan for transforming the Terminal Island Freeway (or SR-103), which abuts the western Plan Area boundary (see Figure 3-3, *Aerial Photograph*), into a local-serving road with an associated greenbelt.



Figure 3-6 - Open Space Network  
3. Project Description



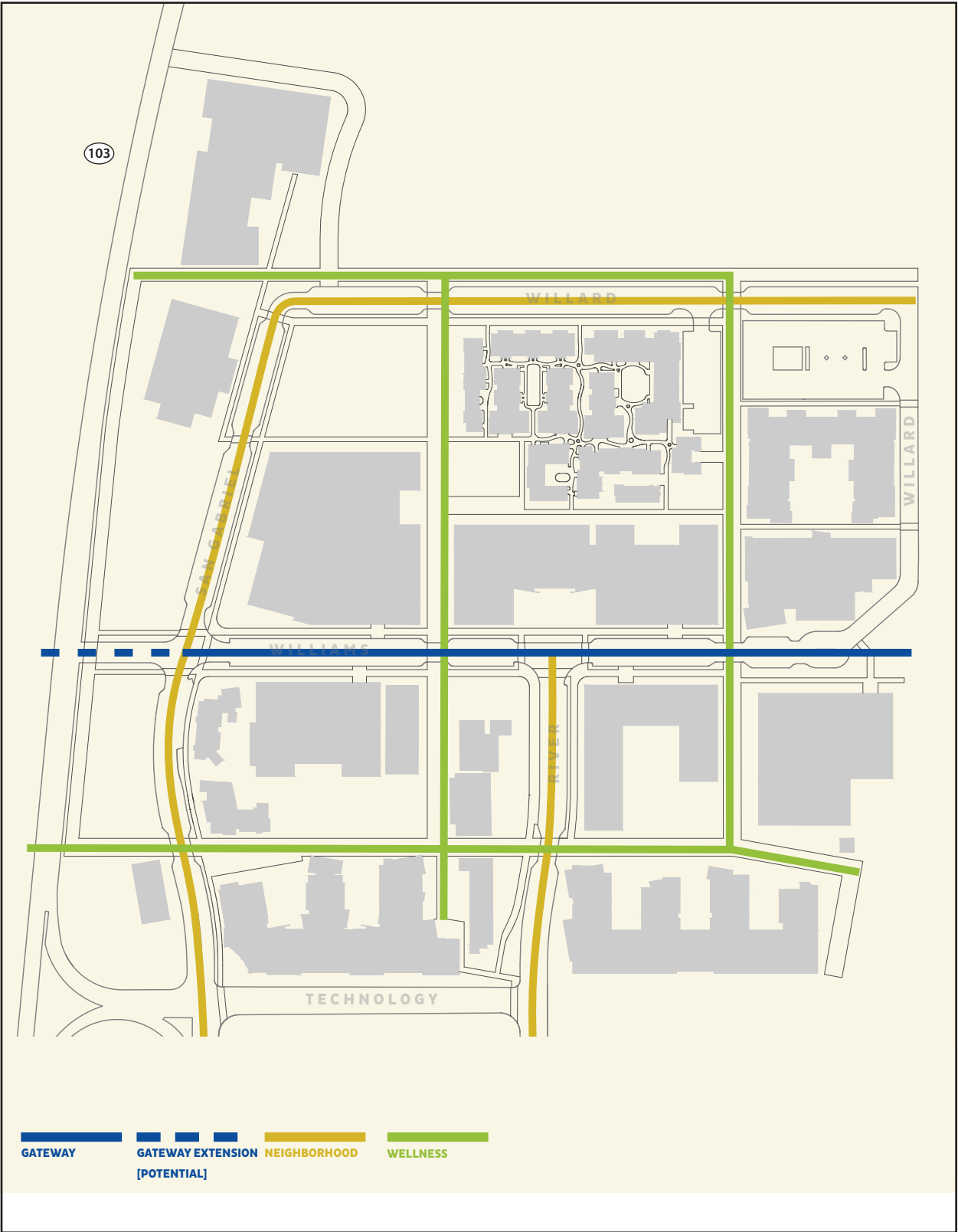
Source: City Fabrick, 2019



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Figure 3-7 - Street Classification Plan  
3. Project Description



Source: City Fabrick, 2019

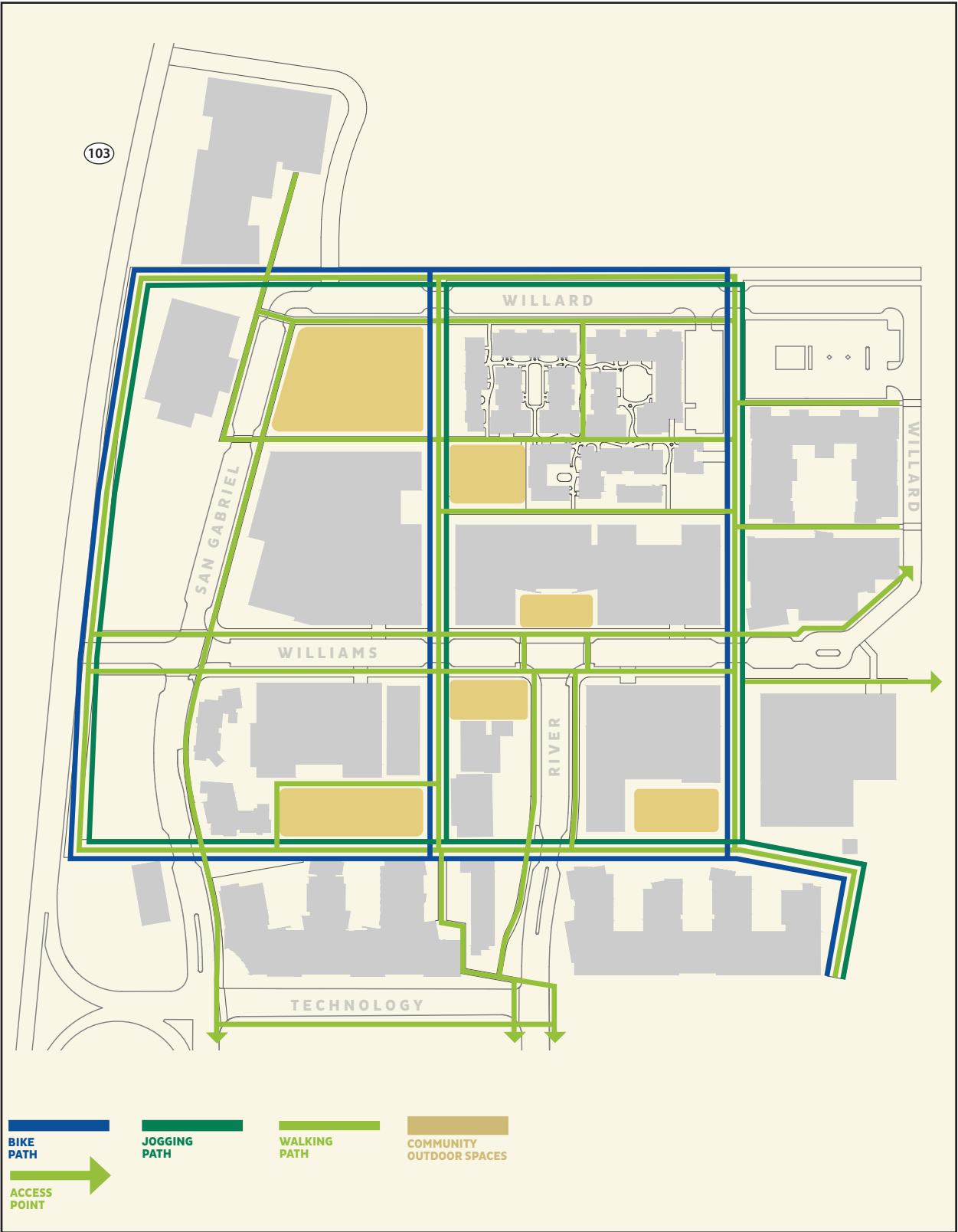
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Figure 3-8 - Neighborhood Connections  
3. Project Description



Source: City Fabrick, 2021

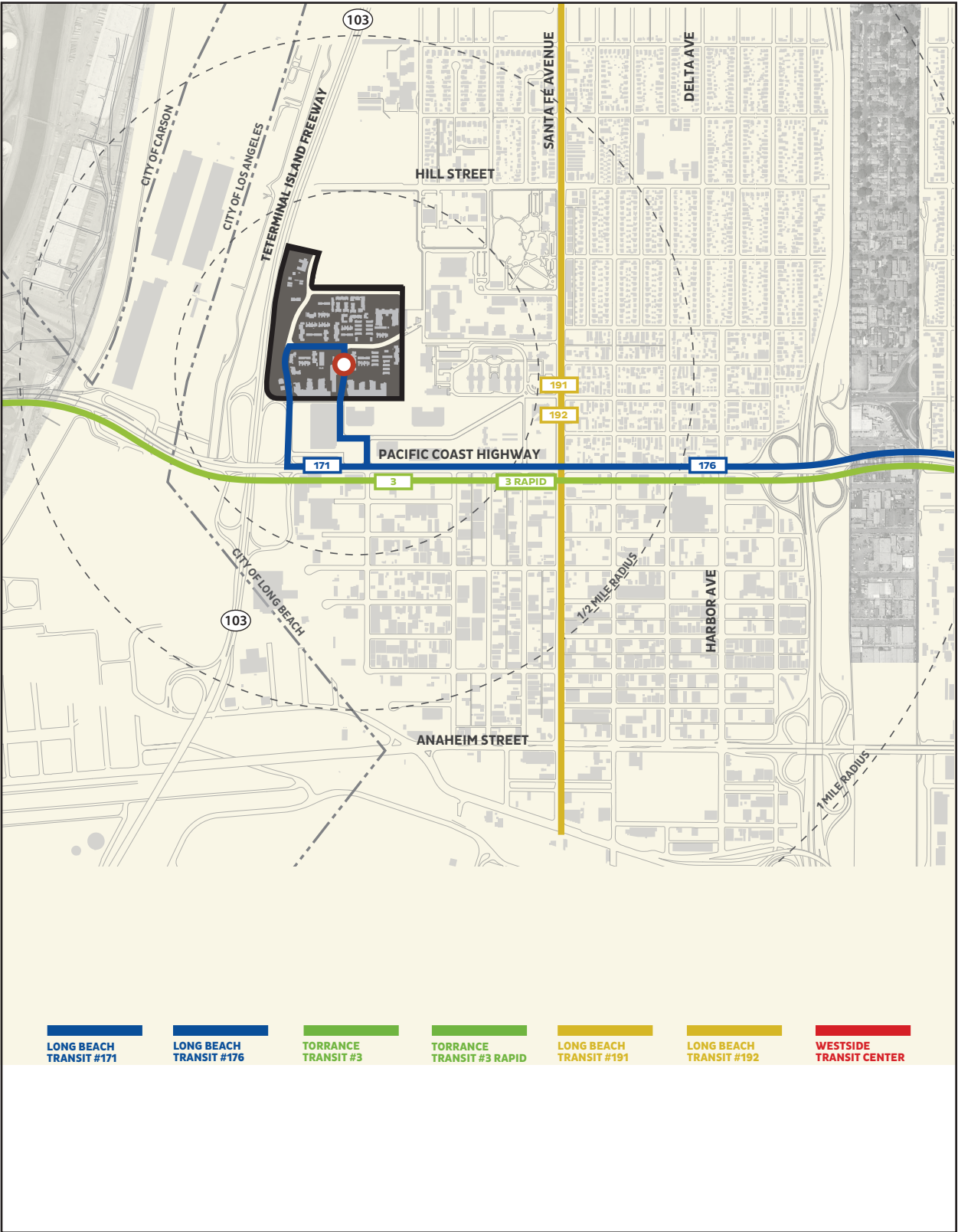
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Figure 3-9 - Local and Regional Transit Service  
3. Project Description



Source: City Fabrick, 2019

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### 3. Project Description

#### *Vehicular Transportation*

For vehicular transportation, streets will be redesigned to improve pedestrian crossings and calm traffic speeds. Roadways will be designed to reinforce the 15 mile per hour speed limit with traffic calming elements such as curb extensions, landscaped medians, and enhanced crosswalks. Emergency egress will also be introduced to the north, east or western portions of the Plan Area—these will be in addition to the existing connections along the south at River Avenue and San Gabriel Avenue. The vehicular entrance at San Gabriel Avenue will remain as the primary access to the Plan Area, with the south River Avenue terminus serving as a secondary/emergency egress point. As shown in Figure 3-5, the Plan Area consists of three Specific Plan street classifications:

- **Gateway Street.** Williams Street is the only Gateway Street within the Plan Area. This street serves as the primary entrance to the Plan Area and runs through the Village Core—it supports the most active uses of the Plan Area. The Gateway Street has two travel lanes and on-street parking, with wide sidewalks and a mix of tree wells and parkways.
- **Neighborhood Street.** San Gabriel Avenue, River Avenue and Willard Street comprise the Neighborhood Streets. These streets provide primary vehicle access throughout the majority of the Plan Area. Neighborhood Streets have two travel lanes and on-street parking, with sidewalks and parkways.
- **Wellness Trail.** These trails not only serve as emergency vehicle access routes throughout the Plan Area, but also serve as active transportation connections. They have separated Class I bike paths, walking trails, and jogging paths (see further details below).

#### *Active Transportation*

For active transportation, a network of wellness trails will be established throughout the Plan Area to encourage walking, jogging, and biking (see Figure 3-8). As noted above, the wellness trails serve as active transportation connections and emergency vehicular access throughout the Plan Area. The wellness trails will provide a safe, separated active transportation network with limited vehicular interruptions. New dedicated bicycle facilities (Class I bike paths), wider walkways and separate jogging trails will improve safety and accessibility while not negatively impacting other modes of transportation. The surface of the trails (i.e., low impact surface such as stabilized decomposed granite) will vary based on the mode of transportation they will serve; they will be designed to meet ADA accessibility and emergency vehicle access requirements. The bicycle and pedestrian facilities displayed in Figure 3-8 demonstrate the intended connections. The exact alignment of the bicycle and pedestrian paths will be established as part of each development project.

Pedestrian walkways will be between seven and ten feet in width, sized to support the surrounding levels of activity. Wider walkways will be provided adjacent to more active uses in the core of the Plan Area, with more modest pedestrian facilities serving secondary and tertiary areas. All existing and new walkways will be designed to meet (or exceed) ADA accessibility as many of the Plan Area residents have impaired mobility. Where possible, the most direct routes will be provided for pedestrians to access their residence, services, and community amenities.

### 3. Project Description

#### *Public Transportation*

The new West Long Beach Transit Center, or CVC Transit Center, developed as part of CVC's Anchor Place development began service in 2018. As a part of the CVC Transit Center development, two existing Long Beach Transit bus routes were rerouted into the Plan Area where they begin and end their respective routes at the CVC Transit Center, which is centrally located in the Plan Area at the southwest corner of Williams Street and River Avenue (see Figure 3-9, *Local and Regional Transit Service*). The CVC Transit Center has real time bus location information so that residents can better plan their trips. It includes seating, shelter, secure bike parking [lockers], bus driver restrooms, tranSMART, and enough space for two buses, actually almost three if necessary. The bus platform is long enough for multiple buses to layover as they wait to begin their respective routes.

The CVC Transit Center serves as the terminus for two Long Beach Transit bus routes that extend into the community, reaching the Veterans Hospital, Long Beach State University and regional shopping centers. Two additional Long Beach Transit bus routes currently ending at Willow Street and Santa Fe Avenue could eventually be extended to this new Westside transit node. The new routes could connect residents to multiple hospitals, regional shopping malls and job centers. Doing so will require coordination with Long Beach Transit and authentic engagement with residents and local stakeholders to weigh the potential benefits and challenges.

Additionally, the current transit access provided to Plan Area residents will be expanded through a vanpool program that connects residents to specific destinations offsite, including grocery stores, medical centers, or community events. This will be accomplished in collaboration with Long Beach Transit, service providers, and local retailers. Car share could also be considered as the residential population expands at CVC in order to provide further transportation flexibility without burdening residents with private automobiles.

#### **Drainage Plan**

The existing drainage system in the Plan Area is private and consists of underground pipes, catch basins, and detention basins that manage the onsite stormwater. There are also stormwater detention areas throughout the Plan Area to achieve the detention requirement established under an agreement by and between the City and CVC. The Plan Area's drainage pattern runs from north to south with the community being serviced by varying sizes of storm drain lines that range from 24-inch lines in the northern portion to a 35- by 24-inch lines in the southern portion. Stormwater collected onsite drains offsite into a neighboring property's 42-inch storm drain line, which in turn ties into an existing 54-inch public storm drain line along Pacific Coast Highway.

Under the Specific Plan, aside from new drainage lines that would connect to individual development sites, a system of sustainable stormwater management infrastructure including catch basins, bioswales and retention/detention facilities will be developed to address the Plan Area's unique drainage conditions. All stormwater, flood protection, and terminal discharge improvements necessary to accommodate the Specific Plan's development phases will continue to implement best management practice requirements and be developed pursuant to the aforementioned onsite stormwater storage requirements. Future drainage system improvements would be designed and constructed in accordance with the City's requirements.

### 3. Project Description

#### Potable Water Plan

The Long Beach Water Department (LBWD) provides potable water delivery service to the Plan Area. Under existing conditions, the existing water system of the Plan Area is owned by LBWD and consists of 6- to 8-inch main lines located in the private streets. There are easements within the private streets for the public water system. Future development projects will include all state-mandated water saving features, including water-efficient faucets, shower heads, and toilets. Future water system improvements would be designed and constructed in accordance with LBWD requirements and would require LBWD review and approval.

#### Wastewater Plan

LBWD operates and maintains the City's wastewater system. LBWD also provides conveyance of wastewater privately collected in the Plan Area. Under existing conditions, the wastewater collection and conveyance system in the Plan Area is private and consists of 6- to 10-inch sewer lines, brick and concrete manholes, and a pump station. The onsite wastewater system flows in the general direction from north to south, which eventually connect to two 8-inch public sewer lines located south, west, and east of the Plan Area. The western line gravity flows to the public connection point in the Technology Place roadway to the southwest while the eastern line flows from a sewer pump station to the public connection point via a force main. Implementation of the Specific Plan would require the construction of new sewer lines that connect to the existing wastewater system. Future wastewater system improvements would be designed and constructed in accordance with LBWD requirements and would require LBWD review and approval.

#### Dry Utilities Plan

The Plan Area is in the service area of Southern California Edison and will continue to be served by the existing electrical transmission lines in and around the Plan Area. Natural gas will continue to be provided by Long Beach Energy Resources, while telecommunication services will continue to be provided by Frontier Communications. All new electrical, natural gas, and telecommunication utility infrastructure will be located in underground conduits and vaults or placed in enclosed spaces (e.g., utility closets). Service providers will be consulted to ensure all utilities will be properly installed and adequate to serve future development accommodated by the Specific Plan.

#### 3.4.3.8 GREEN BUILDING AND SUSTAINABILITY

Green building is the practice of designing, constructing and operating buildings to maximize occupant health and productivity, use fewer resources, reduce waste and negative environmental impacts, and decrease lifecycle costs. Development projects accommodated by the Specific Plan would be designed using applicable green building practices, including those of the most current Building Energy Efficiency Standards (Title 24, California Code of Regulations, Part 6) and California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11). The Building Energy Efficiency Standards contain energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. CALGreen is California's statewide "green" building code. Its purpose to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental

### 3. Project Description

impact and encouraging sustainable construction practices in the following categories: planning and design; energy efficiency; water efficiency and conservation; water conservation and resource efficiency; and environmental quality.

Furthermore, the development standards and design guidelines included in the Specific Plan are based on the gold LEED-ND certification documentation obtained by CVC in 2019. Anchor Place and Cabrillo Gateway are certified, and new phases of development will be certified, for LEED by the U.S. Green Building Council. LEED is a national certification system developed to encourage the construction of energy and resource-efficient buildings that are healthy to live in, and it provides a framework to create healthy, highly efficient and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement. To achieve LEED certification, some of the green building standards that would be implemented by the Specific Plan include:

- Rebuilt streets and a new wellness trail network will form a system of green infrastructure throughout the Plan Area for everything from sustainable storm water management to renewable energy production.
- Streets will be bound by a mix of bioswales, rain gardens and detention basins along with other permeable surfaces including parkways, decomposed granite, and paver systems.
- The wellness trail network and sidewalks will include preservation, replanting and expanding the tree canopy with climate-appropriate species that retain rainwater, provide habitat for local wildlife, and reduce the local heat island and air pollution effects.
- Streetlights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians and vehicles.

#### 3.4.4 Project Phasing and Construction

Future development of the Plan Area under the Specific Plan will occur in multiple phases in response to evolving funding opportunities and logistic constraints. Initial phases will focus on replacement and expansion of the aging housing stock with the later phases dedicated to expansion of affordable units and community amenities and services. As a built out community, upgrading housing and amenities will require removing existing structures and relocating residents, services, and amenities. The phasing of future development is planned to minimize disturbance to current residents and service providers. Also, each new residential development will be accompanied by associated improvements, including upgrading roadways, stormwater infrastructure, utilities, outdoor spaces, and pedestrian access.

For purposes of the environmental analysis in this DEIR and to provide a conservative analysis of environmental impacts, opening year (full buildout) is expected to occur in 2033. As shown in Table 3-4, overall construction is estimated to take approximately 10 years, extending from early 2023 to 2033. It is anticipated that under the overall construction phase, approximately 433 cubic yards of soil will be exported during the grading phase.

## 3. Project Description

**Table 3-4 Specific Plan Development Phase Schedule**

Development Phase <sup>1</sup>	Construction Schedule <sup>1</sup>
Phase A	March 2023 to November 2024
Phase B	January 2024 to September 2025
Phase C	November 2024 to July 2026
Phase D	September 2025 to May 2027
Phase E	January 2027 to February 2028
Phase F	November 2027 to December 2028
Phase G	March 2028 to November 2029
Phase H	January 2029 to September 2030
Phase I	November 2029 to July 2031
Phase J	September 2030 to May 2032
Phase K	July 2031 to March 2033
Phase L	May 2032 to July 2033

<sup>1</sup> Based on information provided by City Fabrick.

Table 3-5 shows the anticipated construction activities, phasing, and equipment mix for each of the activities for this scenario. The construction schedule utilized in the analysis represents a “worst-case” analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. This worst-case scenario generally accounts for the largest amount of demolition and grading hauling activities and amount of development that could occur within a given development phase.

**Table 3-5 Construction Activities, Phasing and Equipment: Worst-Case Development Phase**

Activities <sup>1</sup>	Start/End Dates <sup>1</sup>	Off-Road Equipment <sup>1,2</sup>
Building Demolition	03/01/2023 to 05/23/2023	2 Excavators, 2 Skid Steer Loaders, & 1 Tractor/Loader/Backhoe
Building Demolition Haul	04/01/2023 to 05/26/2023	No additional equipment from building demolition activity
Site Preparation	06/01/2023 to 06/07/2023	1 Grader, 1 Rubber Tired Dozer, & 1 Tractor/Loader/Backhoe
Site Preparation Soil Haul	06/01/2023 to 06/14/2023	No additional equipment from site preparation activity
Rough Grading	06/09/2023 to 06/22/2023	1 Grader, 1 Rubber Tired Dozer, & 1 Tractor/Loader/Backhoe
Geopiers/Extra Foundation Preparation	07/01/2023 to 09/22/2023	1 B27 Electric Vibroflot, 1 Crane, 1 Tractor/Loader/Backhoe, & 1 Generator Set
Utility Trenching	08/01/2023 to 10/23/2023	1 Excavator & 1 Trencher
Building Construction	10/15/2023 to 05/24/2024	1 Crane, 1 Forklift, 1 Generator Set, 1 Tractor/Loader/Backhoe
Architectural Coating	06/01/2024 to 08/23/2024	1 Air Compressor
Asphalt Demolition	07/01/2024 to 07/05/2024	2 Excavators, 2 Skid Steer Loaders, & 1 Tractor/Loader/Backhoe
Asphalt Demolition Haul	07/01/2024 to 07/05/2024	No additional equipment from asphalt demolition activity
Asphalt Paving	08/24/2024 to 09/20/2024	1 Cement and Mortar Mixer, 1 Paver, 1 Paving Equipment, 1 Roller, & 1 Tractor/Loader/Backhoe
Fine Grading	09/23/2024 to 09/27/2024	1 Grader, 1 Rubber Tired Dozer, & 1 Tractor/Loader/Backhoe
Finishing/Landscaping	10/01/2024 to 11/25/2024	1 Forklift

### 3. Project Description

**Table 3-5 Construction Activities, Phasing and Equipment: Worst-Case Development Phase**

Activities <sup>1</sup>	Start/End Dates <sup>1</sup>	Off-Road Equipment <sup>1,2</sup>
<p>Notes:</p> <p><sup>1</sup> Based on information provided, anticipated, and CalEEMod defaults.</p> <p><sup>2</sup> Two water trucks are assumed for the building demolition, site preparation, rough grading, geopiers/extra foundation preparation, asphalt demolition, and fine grading activities.</p>		

### 3.5 INTENDED USES OF THE EIR

This DEIR examines the environmental impacts of the Specific Plan. This DEIR also addresses various actions by the City and others to adopt and implement the Specific Plan. It is the intent of this DEIR to evaluate the environmental impacts of the Specific Plan, thereby enabling the City, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. The anticipated approvals required for the Specific Plan are described above and summarized below, though other future discretionary and non-discretionary approvals and permit may be sought, such as vesting tentative tract maps, grading permits and building permits, etc.

Lead Agency	Action
City of Long Beach	Certification of the Century Villages at Cabrillo Specific Plan Environmental Impact Report Adoption of the Mitigation Monitoring and Reporting Program Adoption of the Century Villages at Cabrillo Specific Plan Adoption of a Long Beach Zoning Ordinance and Zoning Map Amendment
Responsible Agencies	Action
Los Angeles Regional Water Quality Control Board	Issuance of a National Pollutant Discharge Elimination System Permit for construction activities
California Department of Transportation	Approval for any improvements to or work to be conducted in Caltrans right-of-way (Terminal Island Freeway) Issuance of encroachment permits, if necessary

## 4. Environmental Setting

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### 4.1 INTRODUCTION

This section provides a “description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published...from both a local and a regional perspective.” (CEQA Guidelines § 15125(a)(1).) The environmental setting will provide a set of baseline physical conditions that will serve as a tool from which the lead agency will determine the significance of environmental impacts resulting from the Specific Plan. In addition, subsections of Chapter 5, *Environmental Analysis*, provide a more detailed description of the local environmental setting for specific topical areas.

### 4.2 REGIONAL ENVIRONMENTAL SETTING

#### 4.2.1 Regional Location

The City is in the southernmost portion of Los Angeles County, approximately 20 miles south of downtown Los Angeles, and borders Orange County on its eastern edge. The City is bordered by the cities of Carson and Los Angeles to the west, Paramount and Lakewood to the north, and Los Alamitos and Seal Beach to the east. The City also surrounds Signal Hills on all sides in its central area. The Pacific Ocean abuts the City’s southern border (see Figure 3-1, *Regional Location*).

#### 4.2.2 Regional Planning Considerations

##### 4.2.2.1 AIR QUALITY

The City is in the South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (SCAQMD). The SoCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as criteria air pollutants and are carbon monoxide, volatile organic compounds (VOC), nitrogen oxides (NOX), sulfur dioxide, coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead. VOC and NOX are criteria pollutant precursors and go on to form secondary criteria pollutants, such as ozone (O<sub>3</sub>), through chemical and photochemical reactions in the atmosphere. Air basins are classified as attainment/nonattainment areas for particular pollutants depending on whether they meet ambient air quality standards (AAQS) for that pollutant. The SoCAB is designated nonattainment for O<sub>3</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, and lead (Los Angeles County only) under the California and National AAQS and nonattainment for nitrogen (NO<sub>2</sub>) under the California AAQS.

The Specific Plan’s consistency with the applicable AAQS is discussed in Section 5.2, *Air Quality*.

## 4. Environmental Setting

### 4.2.2.2 GREENHOUSE GAS EMISSIONS

Current State of California guidance and goals for reductions in greenhouse gas (GHG) emissions are generally embodied in Executive Order S-03-05; Assembly Bill 32 (AB 32), the Global Warming Solutions Act (2008); and Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act.

Executive Order S-3-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-3-05. Based on the GHG emissions inventory conducted for its 2008 Scoping Plan, the California Air Resources Board (CARB) approved a 2020 emissions limit of 427 million metric tons of carbon dioxide-equivalent emissions (MMTCO<sub>2</sub>e) for the state (CARB 2008). CARB is required to update the Scoping Plan every five years. In 2015, the governor signed Executive Order B-30-15 into law, establishing a GHG reduction target for 2030, which was later codified under SB 32 (2016). The 2016-2017 update to the Scoping Plan addresses the 2030 target of 40 percent below 1990 levels.

In 2008, SB 375 was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles associated with local land use planning (emissions associated with goods movement are excluded) by reducing vehicle miles traveled and vehicle trips through policy instruments such as regional long-range transportation plans, investments, and housing allocations. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 17 regions in California managed by a metropolitan planning organization (MPO). In addition, SB 375 requires CARB to update the targets for the MPOs every eight years. The targets set by CARB in 2010 for the Southern California Association of Governments (SCAG) region are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). Per the SCAG 2016-2040 RTP/SCS, adopted on April 7, 2016, the region will meet or exceed the 2010 passenger per capita targets (SCAG 2016). The updated targets for the SCAG region as set by CARB in March 2018 are an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018). These targets became effective on October 1, 2018 and are applicable for the 2019 RTP/SCS update being initiated by SCAG.

The Specific Plan's consistency with CARB's Scoping Plan is discussed in Section 5.6, *Greenhouse Gas Emissions*.



## 4. Environmental Setting

### Southern California Association of Governments

SCAG is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization (MPO) for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's MPO, SCAG cooperates with SCAQMD, the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents. SCAG has developed regional plans to achieve specific regional objectives, as discussed below.

#### *Regional Transportation Plan/Sustainable Communities Strategy*

On April 7, 2016, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2012-2035 RTP/SCS), “Towards a Sustainable Future.” The 2016–2040 RTP/SCS emphasizes sustainability and integrated planning, and its vision identifies three principles as key to the region's future: mobility, economy, and sustainability. The 2016–2040 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National AAQS as set by the federal Clean Air Act. The 2016–2040 RTP/SCS provides a blueprint for improving quality of life for residents by providing more choices for where they will live, work, and play and how they will move around (SCAG 2016).

The RTP/SCS is updated periodically to allow for the consideration and inclusion of new transportation strategies and methods. SCAG's Regional Council adopted the 2020-2045 RTP/SCS (referred to as “Connect SoCal”) and its associated Program EIR on September 3, 2020. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern (SCAG 2020). Because the goals of the 2016 RTP/SCS were still valid at the time of preparation of this EIR, Project consistency analysis for goals outlined in the 2016 RTP/SCS and Connect SoCal are provided. The Specific Plan's consistency with the applicable 2016–2040 RTP/SCS and Connect SoCal policies is analyzed in detail in Section 5.10, *Land Use and Planning*.

#### *High Quality Transit Areas*

With the adoption of the 2016-2040 RTP/SCS, SCAG has reinforced the importance of placing new growth near transit and has designated high quality transit areas (HQTAs), which are a part of and integrated into the RTP/SCS (Chapter 5). According to SCAG, HQTAs are within a half mile of major transit stops or a transit corridor with a service frequency of 15 minutes or less during peak commute hours (SCAG 2016). The overall land use pattern of the 2016-2040 RTP/SCS focuses jobs and housing in the region's designated HQTAs (SCAG 2016). The Plan Area is identified as an HQTA in the 2016-2040 RTP/SCS (SCAG 2016); it is also identified as an HQTA in Connect SoCal (SCAG 2019). Separate goals, policies, or guidelines have not been adopted for HQTAs.

## 4. Environmental Setting

### Los Angeles Metropolitan Transit Authority

Los Angeles County Metropolitan Transportation Authority (Metro) serves as transportation planner and coordinator, designer, builder, and operator for Los Angeles County. Metro funds improvements to all modes of transportation through several programs, including the Transportation Improvement Program (TIP), the Congestion Management Program (CMP), and Bicycle Transportation Strategic Plan. Metro operates rail and bus transit services throughout Los Angeles County, including the City of Long Beach.

The Specific Plan's consistency with the CMP is provided in Section 5.14, *Transportation and Traffic*.

## 4.3 LOCAL ENVIRONMENTAL SETTING

### 4.3.1 Location and Land Use

#### 4.3.1.1 PROJECT LOCATION

As shown in Figure 3-3, *Aerial Photograph*, the Plan Area is in a highly urbanized area on the western edge of the City (see Figure 3-1, *Regional Location*). The Plan Area encompasses 27-acres within a portion of a former United States Naval housing facility located at 2001 River Avenue. The Plan Area is within the Westside neighborhood of the City. It is approximately 2.5 miles northwest of Long Beach's downtown core. The Plan Area is bordered by Cabrillo High School and associated campus facilities to the north and east; California State Long Beach Job Corps Center to the east; industrial uses (warehouse, distribution and logistics) to the south; and warehouse, distribution and logistics uses to the west, across SR-103. The San Pedro Branch railroad and Southern California Edison's electricity transmission corridor are also to the west, across SR-103. The Ports of Long Beach and Los Angeles are south (see Figure 3-1).

Regional access to the Plan Area is provided by SR-1 (also known as Pacific Coast Highway), SR-103, and Interstate 710 (I-710). SR-1 runs east-west and SR-103, located near the western boundary of the Plan Area, and I-710 both run in a north-south direction (see Figure 3-2, *Local Vicinity*).

#### 4.3.1.2 EXISTING LAND USES

##### Onsite Land Uses

The Plan Area has been developed and redeveloped over the past 70 years, with the former Naval housing and facilities either rehabilitated or removed to accommodate new construction. Existing land uses in the Plan Area are comprised of a combination of one- and two-story rehabilitated Naval housing and new one-to five-story residential buildings, some of which are built over enclosed garages that are lined with ground floor amenities including social service providers and community spaces. As shown in Table 4-1, the Plan Area currently contains 865 dwelling units, 12,380 square feet of amenities, 10,200 square feet of educational uses, 5,850 square feet of commercial/retail uses, and 26,300 square feet of administrative and support services. There is also approximately 5,000 square feet for play area that consists of playground, mural, shade structures, tetherball, and other amenities. Open space and parking areas also spread throughout the Plan Area.

## 4. Environmental Setting

**Table 4-1 Existing Land Uses**

Land Uses	
Residential Units	865 DU
Amenities	12,380 SF
Education	10,200 SF
Commercial/Retail	5,850 SF
Services/Administration	26,300 SF
Residential	580,340 SF
<b>Total</b>	<b>635,070 SF</b>
Parking	
Commercial/Retail	73 PS
Services/Administration	6 PS
Blended Residential	433 PS
<b>Total Parking Required</b>	<b>511 PS</b>
<b>Total Parking Provided</b>	<b>520 PS</b>
Notes: DU=dwelling units; SF=square feet; PS=parking spaces	

The southern portion of the Plan Area, south of Williams Street, has outdoor spaces, circulation paths, and activity centers, while the northern portion has meandering walking paths, open spaces that blend with parking lots, and pockets of activity spaces. Newer residential buildings are developed around deliberate open spaces while the rehabilitated housing units are less dense and spread evenly across portions of the Plan Area. Due to the mature tree canopy of the Plan Area, the difference in building heights, placement, and organization is often screened from view in the northern portion while the variation is more apparent on the southern portions where there are larger open spaces and newer trees. A landscape barrier running along the western perimeter of the community provides a barrier to the Terminal Island Freeway. There are also bike paths and bike infrastructure throughout and surrounding the Plan Area. Currently there are few existing bicycle facilities within 0.5-mile of the Plan Area. Pacific Coast Highway is a designated bicycle route and Santa Fe Avenue, Hill Street and Harbor Avenue are proposed bike routes.

### Surrounding Land Use

Surrounding land uses primarily consist of industrial, residential, and institutional uses. As shown in Figure 3-3, the Plan Area is bordered by Cabrillo High School and associated campus facilities to the north and east; Long Beach Job Corps Center to the east; warehousing, distribution and logistics uses to the south; and warehouse, distribution and logistics uses to the west, across SR-103. Residential uses are located further to the north and northeast, beyond the institutional uses. Also, to the west are major infrastructure that serve the Port of Long Beach and Los Angeles, including the Terminal Island Freeway, San Pedro Branch railroad, and Southern California Edison's electricity transmission corridor.

### 4.3.2 General Plan and Zoning

The place type of the Plan Area pursuant to the current (2019) City of Long Beach General Plan land use map is Regional Serving Facility (RSF). RSFs are those facilities, businesses and operations that not only serve the City, but also the region and parts of the nation.

## 4. Environmental Setting

The current zoning designation of the Plan Area is Subarea D of PD-31. The subarea is intended to promote the adaptive reuse of the existing housing and support facility buildings to provide transitional housing and support services to homeless veterans and the homeless population in the City.

### 4.3.3 Air Quality and Climate

As noted above, the City is in SoCAB, which is managed by SCAQMD. The SoCAB is designated nonattainment for O<sub>3</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, and lead (Los Angeles County only) under the California and National AAQS and nonattainment for nitrogen (NO<sub>2</sub>) under the California AAQS.

The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semipermanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds.

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the Plan Area that best represents the climatological conditions of the project area is the Long Beach, California Monitoring Station (ID 045082). The average low is reported at 44.8°F in January, and the average high is 80.7°F in August (WRCC 2020).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through May. Rainfall averages 12.72 inches per year in the vicinity of the Plan Area (WRCC 2020).

An air quality analysis was performed for the Specific Plan and the results are discussed in Section 5.3, *Air Quality*. Project-related impacts from GHG emissions are discussed in Section 5.6, *Greenhouse Gas Emissions*. Existing climate and air quality conditions in the City are also provided in Sections 5.3 and 5.6.

### 4.3.4 Cultural, Paleontological, and Tribal Cultural Resources

A search of the Sacred Lands File by the Native American Heritage Commission (NAHC) in March 2020 did not identify any previously known cultural resources within the Plan Area. The cultural records search indicated there are 18 recorded cultural resources, both in the Plan Area and within the one-mile search radius of the Plan Area, all of which are historic built environment resources.

The Plan Area is not listed in the National Register of Historic Places, the California Register of Historic Resources, California Historical Landmarks, or California Points of Historical Interest. However, six historic-built environmental resources (buildings/structures) that were identified onsite in the records search are listed in the California Historical Resources Inventory. No archaeological or paleontological resources were observed within the Plan Area during the field survey conducted.

## 4. Environmental Setting

Refer to Sections 5.3, *Cultural Resources*, 5.5, *Geology and Soils*, and 5.15, *Tribal Cultural Resources*, for additional information concerning historical resources and an analysis of project impacts on such resources.

### 4.3.5 Geology and Landform

The Plan Area is in the Los Angeles Basin, a coastal plain at the north end of the Peninsular Ranges Geomorphic Province. The Peninsular Ranges Geomorphic Province is characterized by mountain ranges separated by northwest-trending valleys, and it extends from southwestern California south into Mexico. The Los Angeles Basin is bounded by the Santa Monica Mountains and San Gabriel Mountains on the north, the Santa Ana Mountains on the east, and the Pacific Ocean on the south and west. The Santa Monica Mountains and San Gabriel Mountains are part of the Transverse Ranges Geomorphic Province, an east-west-trending series of steep mountain ranges and valleys extending from Santa Barbara County in the west to central Riverside County in the east.

The Plan Area is relatively flat with minor elevation changes as it slopes downwards to the southwest. Most of the Plan Area consists of existing fill and natural alluvium. The geologic units underlying the Plan Area are mapped entirely as late Pleistocene to Holocene young alluvium (unit 2) which was deposited between 126,000 years ago and through into historic times. The Plan Area is not within an Alquist-Priolo Earthquake Fault Zone, and no evidence of faulting was identified during the geotechnical investigation. The nearest Alquist-Priolo Earthquake Fault Zone to the Plan Area is the Newport-Inglewood Fault, which is about 2.4 miles to the northeast.

Refer to Section 5.5, *Geology and Soils*, for additional information concerning geological and soil conditions and an analysis of the Specific Plan's impacts on geology and soils.

### 4.3.6 Hydrology and Water Quality

The Plan Area is within the Los Angeles River Watershed in the Los Angeles Basin. The Los Angeles River Watershed covers approximately 834 square miles and is bounded at its headwaters by the Santa Monica, Santa Susana, and San Gabriel mountains to the north and west. The southern portion of the watershed captures runoff from urbanized areas surrounding downtown Los Angeles.

The basic drainage pattern for the Plan Area runs from north to south. Runoff is directed to three main discharge locations. Most of the runoff is drained to underground storm drainpipes via sheet flow in the streets and catch basins throughout the Plan Area. The existing storm drain system within the Plan Area is private and is maintained by Century Villages at Cabrillo, and consists of underground pipes, catch basins, and detention basins that manage the onsite stormwater. The existing development in the Plan Area generates a flow rate of 59.78 cubic feet per second and a volume of 8.37 acre-feet from a 10-year storm event.

Refer to Section 5.8, *Hydrology and Water Quality*, for additional information regarding hydrological conditions and an analysis of the Specific Plan's impacts on hydrology and water quality.

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### 4.3.7 Noise

Noise levels in the Plan Area are influenced primarily by vehicular traffic from roadways within and adjacent to the Plan Area, but also include background noise from the Terminal Island Freeway; the Manuel Rail Yard and ICTF Rail Yard, and existing industrial, commercial, and institutional uses surrounding the Plan Area.

Refer to Section 5.10, *Noise*, for additional information concerning the noise environment and an analysis of the Specific Plan's noise impacts.

### 4.3.8 Public Services and Utilities

Public services and utilities are provided to the Plan Area by entities listed in Table 4-2.

**Table 4-2 Public Service and Utility Providers**

Public Services	
Police	Long Beach Police Department
Fire Protection and Emergency Medical Services	Long Beach Fire Department
Public Schools	Long Beach Unified School District
Library	Long Beach Public Library
Parks	City of Long Beach Parks, Recreation, and Marine Department
Utilities	
Water	Long Beach Water Department
Wastewater Collection	Long Beach Water Department
Wastewater Treatment	Sanitation Districts of Los Angeles County
Solid Waste Collection	City of Long Beach Public Works Department, Environmental Services Bureau
Solid Waste Disposal (Landfills)	Sanitation Districts of Los Angeles County
Electricity	Southern California Edison
Natural Gas	Long Beach Energy Resources

Refer to Sections 5.12, *Public Services*, and 5.16, *Utilities and Service Systems*, for additional information regarding public services and utilities and service systems, respectively, and an analysis of the Specific Plan's impacts on services and utilities.

### 4.3.9 Transportation

The existing roadway network surrounding the Plan Area includes a number of major roadways, including Pacific Coast Highway and Terminal Island Freeway, which provide access to the Plan Area. Primary access to the Plan Area is via San Gabriel Avenue, with secondary access provided via River Avenue (see Figure 3-3, *Aerial Photograph*). A detailed list and description of the roadway network serving the Plan Area are provided in Section 5.16, *Transportation and Traffic*.

Currently there are few existing bicycle facilities within 0.5-mile of the Plan Area. Pacific Coast Highway is a designated bicycle route and Santa Fe Avenue, Hill Street and Harbor Avenue are proposed bike routes. Walking paths are spread throughout the Plan Area, including along internal streets. There are no publicly

## 4. Environmental Setting

accessible sidewalks surrounding the Plan Area to allow for pedestrian access. Pedestrian access to the Plan Area is only allowed at the secured entryway at San Gabriel Avenue.

The West Long Beach Transit Center began its service in 2018 and two bus routes, Long Beach Transit #171 and #176 were extended into the Plan Area. Other nearby transit lines include the Torrance Transit #3 and #3 Rapid that run along SR-1, and Long Beach Transit #191 and #192 that run along Santa Fe Avenue (see Figure 3-9, *Local and Regional Transit Service*). These transit lines provide the Century Villages at Cabrillo community access to local hospitals, regional shopping malls, grocery stores, and job centers.

Furthermore, in accordance with Senate Bill 743, Transit priority areas (TPA) are defined as “an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.” (PRC § 21099(a)(7).) The majority of the Plan Area is within a TPA, with the exception of a small portion at the western end of the Plan Area (see Figure 4-1, *Long Beach Transit Priority Areas*).

Refer to Section 5.14, *Transportation*, for additional information concerning existing transportation facilities and traffic conditions and an analysis of project-related impacts.

### 4.4 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed where they are significant. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great a level of detail as that necessary for the project alone. Section 15355 of the Guidelines defines cumulative impacts as “...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Cumulative impacts represent the change caused by the incremental impact of a project when added to other proposed or committed projects in the vicinity.

The CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of two sources:

- A. A list of past, present and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency.
- B. A summary of projections contained in an adopted General Plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impact analyses in this DEIR use a combined Method A and B. Generally, the growth projections that are identified in the current Long Beach General Plan (and other long-range planning documents where necessary, such as SCAG’s 2016–2040 RTP/SCS) have been utilized. To determine cumulative traffic impacts, a growth rate was used consistent with Los Angeles County Congestion Management Plan Guidelines—refer to Section 5.14, *Transportation*, for a discussion of how the growth rate was calculated. In addition to the growth rate, a list of current pending and approved projects, as shown in

## 4. Environmental Setting

Table 4-3, was added to the traffic assumptions in coordination with the City (see traffic impact study in Appendix I for list of projects).

**Table 4-3 Related Projects**

No.	Project Location	City	Land Use	Size
1	2136 W 16th Street	Long Beach	Industrial	8,000 SF
2	1468 14th Street	Long Beach	Industrial	22,000 SF
3	1834 Harbor Avenue	Long Beach	Industrial	51,450 SF
4	1404 Hays Avenue	Long Beach	Industrial	19,620 SF
5	1675 Santa Fe Avenue	Long Beach	Industrial	21,380 SF
6	1601 San Francisco Avenue	Long Beach	Industrial	94,870 SF
7	901 De Forest Avenue	Long Beach	Stormwater Treatment	10,000 SF
8	1450 Cota Avenue	Long Beach	Industrial	7,560 SF
9	1360 Cowles Street	Long Beach	Industrial	9,700 SF
10	700 W 17th Street	Long Beach	Industrial	29,730 SF
11	460 W Pacific Coast Highway	Long Beach	Affordable Housing	40 DU
12	2221 W Williams Street	Long Beach	Affordable Housing	90 DU
13	1318 Cota Avenue	Long Beach	Industrial	22,000 SF
14	Southern California International Gateway	Los Angeles	Rail Intermodal Facility	-

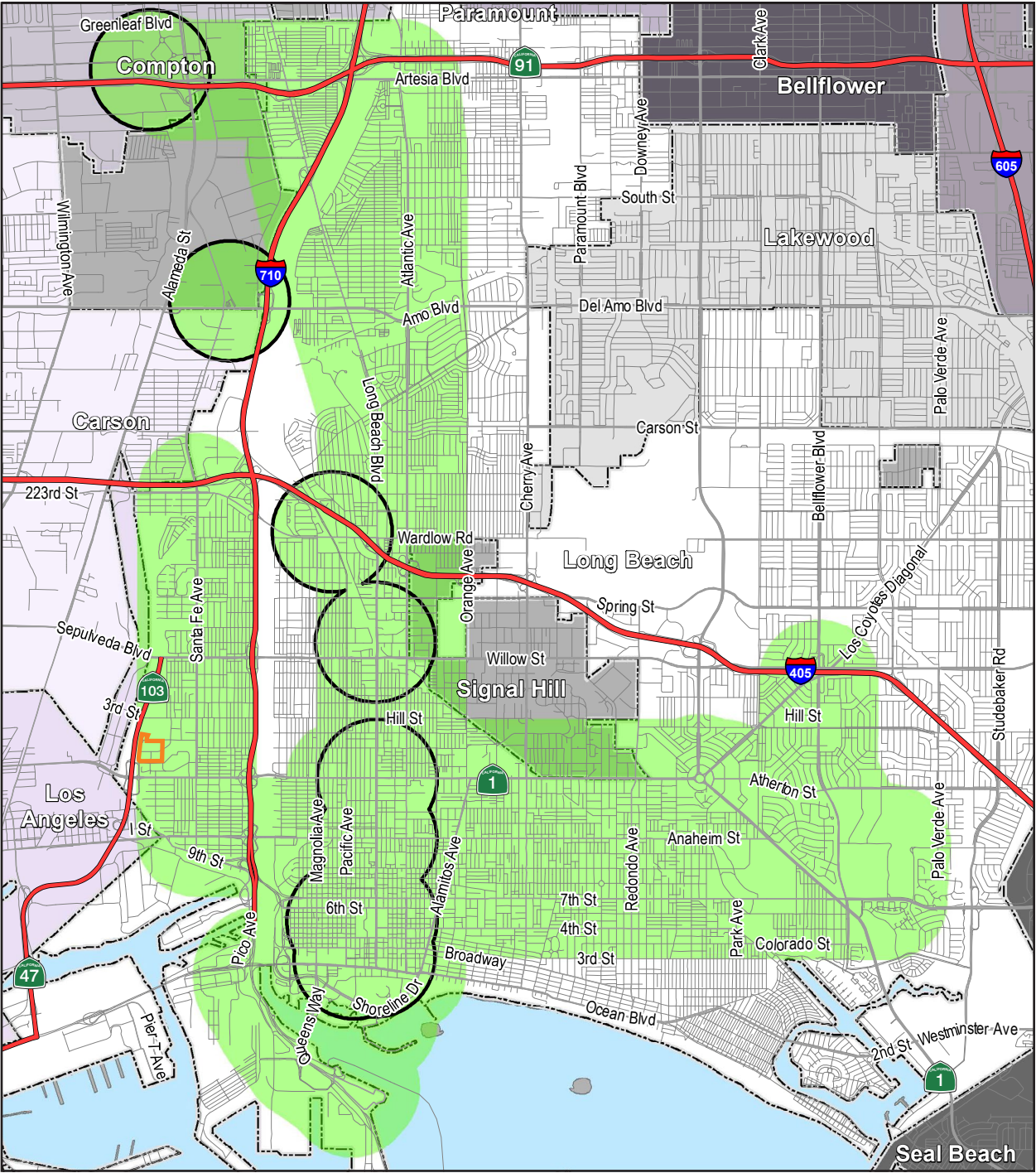
Source: Appendix I  
SF= Square Feet  
DU= Dwelling Units

In general, the potential for cumulative impacts is contiguous with the City boundary since the City is the service provider for various City services and public utilities. The Land Use Element and associated land use districts detailed in the Long Beach General Plan designate the general distribution and location of land to be used for residential, commercial, industry, institutional, open space/parks, and other land use types. The Long Beach General Plan guides future development and growth to promote the health, safety, and welfare of the community. To regulate the amount of building intensity, the Long Beach General Plan also includes development standards (e.g., maximum densities for each residential land use designation) that define the amount and type of physical development allowed in each land use category. This geographic planning framework is used in both the Long Beach General Plan and Zoning Ordinance (Title 21 of the Long Beach Municipal Code).

Some impacts are site specific, such as cultural resources; however, several of the environmental topic areas consider a larger area to determine cumulative impacts, such as air quality, greenhouse gas emissions, hydrology and water quality, noise, and transportation. The cumulative study area, methodology, and impacts for each environmental impact category are described in detail in Chapter 5, *Environmental Analysis*, of this DEIR.



Figure 4-1 - Long Beach Transit Priority Areas  
4. Environmental Setting



- Plan Area Boundary
- Half Mile from High Quality Transit Corridor or Major Transit Stop
- Half Mile from Major Transit Stop

0 1  
Scale (Mile)



Source: LSA, 2020

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## 4. Environmental Setting

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## 4. Environmental Setting

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## 5. Environmental Analysis

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Chapter 5 examines the environmental setting of the proposed project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental issue area that was determined to need further study in the EIR. This scope was determined in the initial study and notice of preparation (NOP), which were published January 28, 2020 (see Appendix A), and through public and agency comments received during the NOP comment period from January 28 to February 26, 2020 (see Appendix B). Additionally, a scoping meeting was held on February 5, 2020. Environmental issues and their corresponding sections are:

- 5.1 Aesthetics
- 5.2 Air Quality
- 5.3 Cultural Resources
- 5.4 Energy
- 5.5 Geology and Soils
- 5.6 Greenhouse Gas Emissions
- 5.7 Hazardous Materials
- 5.8 Hydrology and Water Quality
- 5.9 Land Use and Planning
- 5.10 Noise
- 5.11 Population and Housing
- 5.12 Public Services
- 5.13 Recreation
- 5.14 Transportation
- 5.15 Tribal Cultural Resources
- 5.16 Utilities and Services Systems

Sections 5.1 through 5.16 provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures designed to reduce significant impacts where required and when feasible. The residual impacts following the implementation of any mitigation measure are also discussed.

The initial study also determined that certain issues under an environmental topic would not be significantly affected by implementation of the project; these issues are not discussed further in this EIR.

### Organization of Environmental Analysis

To assist the reader with comparing information between environmental issues, each section is organized under nine major headings:

## 5. Environmental Analysis

- Environmental Setting
- Thresholds of Significance
- Environmental Impacts
- Cumulative Impacts
- Level of Significance Before Mitigation
- Mitigation Measures
- Level of Significance After Mitigation
- References

In addition, Chapter 1, *Executive Summary*, has a table that summarizes all impacts by environmental issue.

### Terminology Used in This Draft EIR

The level of significance is identified for each impact in this DEIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

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

## 5. Environmental Analysis

### 5.1 AESTHETICS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts to the visual character of the area covered by the Villages at Cabrillo Specific Plan Area (Plan Area) and its surroundings associated with implementation of the Villages at Cabrillo Specific Plan (Specific Plan). This section includes a discussion of the qualitative aesthetic characteristics of the environment that could potentially be altered by the Specific Plan's implementation, as well as the Specific Plan's consistency with established relevant visual resource policies. As noted below, SB 743 established that aesthetics impacts for mixed-use residential projects located within a transit priority area would not be considered significant under CEQA. As the Specific Plan will allow for the redevelopment of an urban area with mixed-use residential structures on an infill site within a transit priority area, any aesthetic impacts would not be considered significant. Thus, this analysis is provided for informational purposes.

#### 5.1.1 Environmental Setting

##### 5.1.1.1 REGULATORY BACKGROUND

State and local laws, regulations, plans, or guidelines related to aesthetics and visual character that are applicable to the Specific Plan are summarized below.

##### State

###### *The Public Resources Code*

SB 743, enacted in 2013, establishes how environmental impacts related to aesthetics for infill projects located in transit priority areas are addressed in an EIR. Specifically, SB 743 amended the PRC to state that a project's aesthetic and parking impacts shall not be considered a significant impact on the environment if: 1) the project is a residential, mixed-use residential or employment center project; and 2) the project is located on an infill site within a transit priority area. (PRC § 21099(d)(1).)

###### *California Building Code: Building Energy Efficiency Standards*

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission [CEC]) in June 1977 and most recently revised in 2019. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The most recent (2019) California Building Energy Efficiency Standards (Title 24, Part 6, of the California Code of Regulations [CCR]) went into effect on January 1, 2020, and are applicable to all newly constructed buildings and additions and alterations to existing buildings. The Building Energy Efficiency Standards are designed to reduce wasteful, uneconomic, inefficient, or unnecessary consumption of energy, and enhance outdoor and indoor environmental quality. For example, the Building Energy Efficiency Standards outline mandatory provisions for lighting control devices and luminaires.

## 5. Environmental Analysis

### AESTHETICS

#### Local

##### *City of Long Beach Municipal Code*

The Long Beach Municipal Code (LBMC) identifies land use categories, development standards, and other general provisions that ensure consistency between the Long Beach General Plan and proposed development projects. The following provisions from the LBMC address visual quality and help minimize light and glare impacts associated with new development projects in the City.

- **Section 21.41.259 (Parking Areas – Lighting).** All parking lots and garages are required to be illuminated with lights directed and shielded to prevent light and glare from intruding onto adjacent sites. The light standards shall not exceed the height of the principal use structure or one foot for each two feet of distance between the light standard and the nearest property line, whichever is greater.
- **Chapter 21.42 (Landscaping Standards).** The purpose of the Landscaping Standards is “to improve the physical appearance of the City by providing visual, ecological, and psychological relief in the urban environment. Successfully designed and maintained landscape areas provide an attractive living, working, and recreating environment in addition to their role in reducing water and energy consumption.” (LBMC § 21.42.010). All required yards and setbacks shall be attractively landscaped primarily with drought tolerant and native plant materials. Decorative non-living materials may be used. All landscaped and paved areas shall be maintained in a neat, attractive, orderly and water efficient condition.
- **Section 21.44.060 (On-Premises Signs, Design Standards for All Signs).** On-premises signs are required to be designed in conformance with standards related to character, complementary design, and illumination.

##### *City of Long Beach General Plan*

A general plan guides the long-range growth of the community, including new development. The City’s General Plan includes an Urban Design Element. The Urban Design Element seeks to:

... aid and shape the continued evolution of the urban environment within Long Beach, while at the same time leveraging the unique relationship of the City to its natural environment. It is concerned with both the preservation of existing neighborhoods that define its unique character and building upon them to allow for continued adaptation and improvement of the built environment.

The Urban Design Element identifies four goals related to: (1) Creating Great Places; (2) Urban Fabric; (3) Public Spaces; and (4) Edges, Thoroughfares, and Corridors. The intended outcome the Urban Design Element is to strengthen the existing areas of the City that illustrate its identity and community values. Each goal has a number of corresponding strategies and policies to accomplish each goal. A description of each goal is provided below:

- **Creating Great Places:** Creating Great Places allows for friends and strangers to interact in a space that encourages activity, spontaneity, exploration and discovery. Great Places encourage businesses to relocate



## 5. Environmental Analysis

### AESTHETICS

for both the quality of life of employees and their families. These Great Places are timeless and demand to be visited over and over again.

- **Urban Fabric:** Defining patterns within the existing Urban Fabric successfully expresses what makes Long Beach unique, and is reflective of the neighborhoods and context of the City. It allows for the establishment of new development patterns that do not detract from successful, historical development patterns, but rather builds upon and celebrates the pre-existing Urban Fabric, both natural and man-made, as a component of place.
- **Public Spaces:** Integrating Public Spaces that allow for the community to come together for informal and formal events, public art can be put on display, children and adults can engage in physical activities, and civic engagement can occur. These Public Spaces are informed by the context of Long Beach and its history of diversity, uniqueness, and civic involvement.
- **Edges, Thoroughfares, and Corridors:** Edges, Thoroughfares, and Corridors reflect the uniqueness of the natural and urban environments and the neighborhoods that they traverse. Natural and man-made edges, such as the Pacific Ocean, Port of Long Beach, Los Angeles River, and San Gabriel River, act as catalysts for improved environmental health, quality of life, and opportunities for non-motorized modes of transit. Thoroughfares act to define the larger commercial activities of the City, while at the same time integrating pedestrian amenities that allow for transitioning into adjacent districts. Corridors are the heart of the community where individual neighborhood characteristics are celebrated, opportunities for the ‘public room’ concept are provided, and a wide-array of multimodal transportation options are supported. Functioning corridors enhance the quality of adjacent neighborhoods, connectivity to them, and accessibility to goods and services.

The Plan Area is located in the Regional-Serving Facility Place Type, which are facilities, businesses and operations that not only serve the City of Long Beach, but also the region and parts of the nation.

#### 5.1.1.2 EXISTING CONDITIONS

##### Visual Character

The Plan Area is currently developed with the Century Villages at Cabrillo community, which contains a range of residential, commercial, educational, amenities and supportive service buildings that range between one to five stories (see Figure 3-3, *Aerial Photograph*). Four- to five-story residential buildings are located along the northern and southern sides of the Plan Area. One- to two-story residential and non-residential buildings are located on the western and eastern sides of the Plan Area and characterize the interior of the Plan Area. Landscaping, open space and community amenities are provided throughout the Plan Area. An on-site park is located along the Plan Area’s western side, adjacent to State Route (SR) 103. The four- to five-story residential buildings, landscaping, and gated driveways along the southern side of the Plan Area generally characterize views of the Plan Area from public rights-of-way to the south. The onsite park and one-story buildings characterize views of the Plan Area from SR-103. Intermittent views of the buildings onsite can be seen from the Pacific Coast Highway (SR-1) to the southwest and south of the Plan Area. Industrial uses to the south of the Plan Area generally block views of the Plan Area from SR-1.

## 5. Environmental Analysis

### AESTHETICS

The Plan Area is located in an urbanized area. The Plan Area and the surrounding community are built out. Cabrillo High School and associated campus facilities are located to the north and east of the Plan Area. The Long Beach Job Corps Center is to the east of the Plan Area. Warehouse, distribution and logistic uses are located to the south and west (across SR-103) of the Plan Area.

#### Landform

The terrain within the Plan Area is flat. Overall, there is little change in elevation throughout the Plan Area.

#### Light and Glare

Existing nighttime light sources within the Plan Area and in its vicinity include security lighting, sign and landscaping illumination, street lights, lighting in parking areas, and vehicle headlights. In the Plan Area and in the vicinity of the Plan Area, existing daytime glare is caused by sunlight reflecting off of reflective surfaces such as parked cars and cars traveling on adjacent roadways, light-colored building material, and windows. Ambient lighting also comes from vehicles traveling on State Route 103 to the west of the Plan Area.

### 5.1.2 Thresholds of Significance

Appendix G of the CEQA Guidelines states that, “except as provided in Public Resources Code Section 21099,” a project would normally have a significant effect on the environment if the project would:

- AE-1 Have a substantial adverse effect on a scenic vista.
- AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- AE-3 In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.
- AE-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold AE-1
- Threshold AE-2

These impacts will not be addressed in the following analysis.

## 5. Environmental Analysis

### AESTHETICS

### 5.1.3 Environmental Impacts

#### 5.1.3.1 METHODOLOGY

The assessment of aesthetic impacts is subjective by nature. Aesthetics generally refer to the identification of visual resources and the quality of what can be seen, as well as an overall visual perception of the environment. Aesthetic impacts can be assessed by considering proposed grade separations, landform alteration, building setbacks, scale, massing, and landscaping features associated with project design. The analysis in this section identifies and objectively examines factors that contribute to the perception of aesthetic quality and potential impacts.

#### 5.1.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.1-1: Implementation of the Specific Plan would not conflict with applicable zoning and other regulations governing scenic quality. [Threshold AE-3]**

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**Impact Analysis:** The Plan Area is located in an urbanized area. The Plan Area is currently developed with the Villages at Cabrillo community, which contains 865 dwelling units and 635,070 square feet of non-residential uses, including amenities, educational facilities, commercial, and services/administration uses for onsite residents. Although the Specific Plan would change the visual character of the Plan Area by increasing building square footage and residential units onsite, project implementation would not degrade the existing visual character of the site or its surroundings. The following discussion analyzes the Specific Plan's potential (under the construction and operational phases) to conflict with applicable zoning and other regulations governing scenic quality.

#### Construction Phase

Implementation of individual development projects accommodated by the Specific Plan would result in construction activities that would temporarily change the visual character of the Plan Area and its surroundings. Construction activities would involve demolition, grading and site clearing activities and building and site improvements. Construction staging areas, including earth stockpiling, storage of equipment and supplies, and related activities would contribute to a generally "disturbed site," which may be perceived by some as a visual impact.

However, these effects would be typical of any site in the City that undergoes development or redevelopment. Development accommodated by the Specific Plan is anticipated to be completed in multiple, phases. Specifically, as shown in Table 3-4, Specific Plan Development Phase Schedule, overall construction is estimated to take approximately 10 years, extending from early 2023 to 2033. Construction activities may be unsightly during the site preparation and construction phases, but they are not considered significant because

## 5. Environmental Analysis

### AESTHETICS

they are temporary in nature and would not conflict with zoning or other regulations governing scenic quality. Also, temporary construction fencing would be erected to help shield the construction areas.

#### Operational Phase

##### *Zoning*

The Plan Area is currently zoned Planned Development District 31 (PD-31), Subarea D, *California State University and Technology Center/Villages at Cabrillo Long Beach Vets.* Section IV.1 of the PD-31 outlines architectural standards for each subarea.

The Specific Plan includes a Zoning Ordinance Amendment and Zoning Map Amendment to change the zoning designation onsite to Century Villages at Cabrillo Specific Plan. Upon City approval of the proposed zone change, the Specific Plan (including its development standards and design guidelines) would supersede the requirements of PD-31. With approval, the Specific Plan would be consistent with the Zoning Ordinance. If the Specific Plan does not address a specific issue, the City's Municipal Code requirements would apply. As such the Specific Plan would not conflict with zoning regulations governing scenic quality as the Specific Plan would establish the regulatory framework for development within the Plan Area. A discussion of the Specific Plan's development standards and design guidelines is provided below.

##### *Development Standards*

The Specific Plan's development standards provide regulatory guidance for buildout of the Plan Area. All buildings must comply with the Specific Plan design standards. The development standards would ensure a high standard of design and provide quality environments while providing program and design flexibility. As shown in Figure 3-5, *Land Use Districts*, the Specific Plan separates the community into two districts: Village Core and Village General. The Village Core is focused within the center of the community and would have more active uses adjacent to the transit plaza and main entrance. Building heights, massing and placement are designed to reinforce the desired level of activity within the center of community within this district. The Village General district provides multi-family residential as its primary use with amenities, services, and administration functions as accessory uses. Building height and placement would provide greater opportunity for landscape areas and tree canopy.

Development intensity for the Plan Area is guided by maximum floor area ratio (FAR) and building heights, as shown in Table 3-2 (located in Chapter 3, *Project Description*). The building heights correspond to those described in the LEED – Neighborhood Development standards. Development standards would allow a development intensity of up to 4.0 FAR within the Village Core district and 3.0 FAR in the Village General district. Maximum buildings heights would be provided at 80 feet (seven stories) in the Village Core district and 60 feet (five stories) in the Village General district. The development standards also establish building setbacks (building placement) and allowable uses. Setback requirements for buildings are calculated based on the bordering use (for example, setbacks along the wellness trails are required to be between 10 feet and 20 feet, and setbacks bordering adjacent properties are required to be 10 feet minimum with no maximum setback) (see Table 3-3, *Building Placement*). Building setbacks, along with building height and massing, would provide opportunities to reinforce walkable neighborhoods along streets and outdoor spaces.

## 5. Environmental Analysis AESTHETICS

### *Design Guidelines*

Section 3, *Design Guidelines*, of the Specific Plan generally shape the relationship of buildings and open space areas within the Plan Area and how the Plan Area would be seen from adjacent properties. The Project has been documented for LEED –Neighborhood Development certification, which includes guidance on design throughout the Plan Area. The design guidelines address:

- Building Form and Design
- Frontages and Urban Edges
- Open Space
- Parking Services
- Tree Canopy
- Signage and Wayfinding
- Outdoor Lighting
- Environmental sustainability.

Buildings constructed under the Specific Plan would focus taller buildings toward the center of the Plan Area, clustered around the intersection of Williams Street and River Avenue, and taper down going to the east and north. Building heights, and activity levels of the new development would taper off from a maximum of 80 feet in the center of the Plan Area to 40-60 feet going toward the edges of Plan Area. Building massing will be used to define outdoor spaces and urban walls along primary circulation paths. Building heights and setbacks would also maximize solar access for outdoor spaces and light and air for residential units. Buildings would be designed to respond to the existing context of the site and adjacent uses. The design guidelines encourage reinforcement of the urban edge, contemporary architectural design, accessible and visible design details, human-scale building articulation that complement neighboring developments, high quality material and color use, and building/façade depth. Ground floor level of development would typically include higher ceiling heights to provide flexibility and accommodate a variety of uses. These design features and ground floor treatments would support pedestrian-oriented development, accentuate open spaces, and would be mindful of existing buildings onsite and adjacent to the Plan Area.

Open space and parking are generally encouraged to support the pedestrian environment and complement overall architectural character of the community. For example, community and passive open space would be provided within a quarter-mile walk of 90 percent of building entrances. Loading and service locations (e.g. loading, utilities, and refuse areas) will be located to avoid impacting visual frontages and from being a nuisance for building occupants, neighboring properties or circulation. Parking design standards are further based on LBMC Section 21.41.

The design guidelines encourage the preservation of the existing tree canopy whenever possible. Future landscaping improvements shall include resilient, drought tolerant landscaping, ideally plants that are native to California or to similar climates, with a limited use of artificial turf. Landscaping would also follow Chapter 21.42 of the LBMC, and the LEED-Neighborhood Development certification documentation. Signage and wayfinding and outdoor lighting would be developed to complement building character. Signage would follow

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LBMC Section 21.44, On-Premises Signs. Further, CVC LEED-Neighborhood Development Certification Documentation would guide signage and lighting.

#### *Conclusion*

With approval, the Specific Plan would be consistent with the Zoning Ordinance. The Specific Plan would not conflict with zoning regulations governing scenic quality as the Specific Plan would establish the regulatory framework for development within the Plan Area.

#### **General Plan Consistency**

The City's Urban Design Element is guided by four goals: (1) Creating Great Places; (2) Urban Fabric; (3) Public Spaces; and (4) Edges, Thoroughfares, and Corridors. The Specific Plan is designed to be consistent with the Long Beach General Plan, including the Urban Design Element. The Specific Plan would support the Urban Design Element's four goals.

Strategies under the Great Places goal outline a vision for functional neighborhoods that are aesthetically pleasing, provide for healthy activity, are economically viable, enhance social and cultural vitality and promote the arts. The Specific Plan aligns with this goal as it provides for the buildout of a functional, aesthetically pleasing neighborhood (through its development standards and design guidelines, discussed above). The Specific Plan would support healthy activity and enhance social interactions by improving the connectivity and efficiency of the Plan Area through roadways, open space, and a network of wellness trails. The Specific Plan would further support health and sustainability consistent with the Great Places goal. For example, the Specific Plan's open space and circulation system promotes a healthy lifestyle by creating opportunities for pedestrians to walk within the community and to nearby services. In addition, the street and trail networks would be flanked by bioswales, rain gardens, detention basins along with other permeable surfaces. The wellness trails would allow for the expansion of trees onsite, which increases the tree canopy. As discussed in Section 6.8 of the Specific Plan, the Specific Plan would be certified gold through the LEED for Neighborhood Development, which includes guidance for sustainability through planning, design, construction, and programming.

The Specific Plan would support the Urban Fabric Goal. The Specific Plan creates a complete neighborhood with residences, non-residential uses (such as commercial, educational, and supportive services), and public open space and a wellness trail network. The wellness trail and street improvements encourage walkability and active forms of transportation. The Specific Plan's development standards and design guidelines require that development is mindful of its existing community and abutting properties (see Section 4.5 of the Specific Plan). The Specific Plan's building heights, densities, placement, and design would complement adjacent properties (as discussed above).

The Specific Plan's Open Space Plan would support the Urban Design Element's Public Space Goal. As discussed in Section 4.6 of the Specific Plan, the plan provides for different types of open space that range between public to private spaces. The Open Space Plan would allow for deliberately designed public spaces linked through a wellness trail network, promoting access to open space areas onsite. The open space throughout the Plan Area would be designed to provide a physical and visual transition between the public

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and private areas (see Figure 3.6, Open Space Network). The plan would ensure that the Plan Area includes an adequate amount of open space facilities onsite. The Specific Plan further includes guidelines to increase trees onsite, which contributes to the City's urban forest and tree canopy.

The Specific Plan's development standards, design guidelines, and circulation plan would support the Edges, Thoroughfares, and Corridors Goal. As discussed above, the Specific Plan encourages architectural design, setbacks, and landscaping that accentuate streets, trails, and edges and emphasize a pedestrian-scale development. For example, the design guidelines require fifty percent of the block length of existing and new circulation networks to have a minimum ratio building height-to-street centerline of 1:1.5 (see Section 6.1 of Specific Plan). Further architectural design would reinforce the Specific Plan's urban edge with consistent massing along the circulation network.

The Specific Plan's development standards and design guidelines would also support the Urban Design Element policies for the Regional-Serving Facility Place Type designation. As discussed above, the Specific Plan includes enhanced edges within the Plan Area and with adjacent uses, provides goals to address incompatible land uses, expands the tree canopy, provides for a pedestrian-oriented circulation system, provides for architectural and design feature compatibility with neighborhood developments, consolidates parking and loading, and provides appropriate open space area connected with a trail network.

### Conclusion

The Specific Plan would not conflict with applicable zoning or other regulations governing scenic quality, and compliance with the Specific Plan would ensure that development would not conflict with regulations governing scenic quality. Although the Specific Plan would change the existing visual quality of the Plan Area, it would create an attractive, well-designed mixed-use community with high-quality pedestrian environment, architectural design, landscaping, and streetscaping. Provisions of the Specific Plan, including the Development Standards, Open Space Plan, Street Classifications and Streetscape, and Design Guidelines would ensure design details of the Specific Plan are context-sensitive to the existing Century Villages at Cabrillo community and surrounding properties. Impacts would be less than significant.

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**Impact 5.1-2: Construction and operation of the Specific Plan would generate additional light and glare in the Plan Area and its surroundings, but would not create a new source of substantial light and glare that could adversely affect day or nighttime views in the area. [Threshold AE-4]**

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**Impact Analysis:** Nighttime light and glare impacts are the effects of a project's exterior lighting upon adjacent uses and areas. Glare can also be generated by light reflecting off passing cars and large expanses of glass windows or other reflective surfaces. Excessive light and/or glare can impair vision, cause annoyance, affect sleep patterns, and generate safety hazards when experienced by drivers. A significant impact may occur if lighting as part of the Specific Plan exceeds adopted thresholds for light and glare, including exterior lighting or light spillover, or if the Specific Plan creates a substantial new source of light or glare. Light and glare impacts are determined through a comparison of the existing light and glare sources with the light and glare generated from buildout of the Specific Plan. The Plan Area and surrounding area are built out and contain many existing sources of nighttime illumination and daytime and nighttime glare. The Plan Area is adjacent to SR-103.

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#### Construction

Pursuant to LBMC Section 8.80.202, construction activities are prohibited from 7 PM to 7 AM Mondays through Fridays (including national holidays), and before 9AM or after 6PM on Saturdays. Construction is prohibited on Sundays unless a permit has been issued. As Section 8.80.202 requires construction to occur primarily during daylight hours, buildout of the Specific Plan is not anticipated to result in new sources of temporary light and glare. Any nighttime construction would comply with the LBMC's regulations regarding light spillage. Lighting and glare impacts during construction consistent with the Specific Plan and the LBMC would result in a less than significant impact.

#### Operation

Illumination and glare impacts are the effects of a development's exterior lighting upon adjoining uses. The Plan Area is surrounded by Cabrillo High School, the Long Beach Job Corps Center, industrial uses, and SR-103. Industrial uses are further located to the west of the Plan Area across from SR-103. As discussed under Section 5.1.1.1, *Environmental Setting*, substantial sources of light and glare already exist in the Plan Area and in the vicinity of the Plan Area, such as vehicle headlights, streetlights, security lighting, and landscape lighting.

The Specific Plan would provide outdoor lighting similar to existing lighting onsite. Buildout and operation of the Specific Plan would result in a net increase of 515 residential units and 129,520 square feet of non-residential space compared to existing conditions (see Table 3-1, Summary of Proposed Land Uses), and buildout of the Specific Plan would result in more opportunities for lighting and reflective surfaces compared to existing conditions. However, compliance with the California Building Code, Building Energy Efficiency standards and lighting requirements of the LBMC would reduce light impact from the buildout of the Specific Plan. Additionally, buildout of the Specific Plan would be required to comply with the development standards and design guidelines outlined in the Specific Plan. For example, along the Plan Area's western side, adjacent to the SR-103, development standards require a minimum building setback of 10 feet (see Table 3-3, *Building Placement*). Additionally, design guidelines provide the following guidelines related to outdoor lighting:

- **Safety:** The light, landscape, and building design of the overall site and adjacent environments of proposed development shall be designed to provide consistent light levels throughout the common useable spaces and circulation network to support perceived and actual safety.
- **Conflict Areas:** Special attention shall be paid to lighting levels where there are potential conflicts between pedestrians, vehicles, and bicyclists to ensure safety, including intersections and driveway curb cuts.
- **Consistent Light Standards:** Light fixtures and design of proposed development shall be integrated architecturally with the overall site, building, and surrounding area.
- **Pedestrian-scale lighting** shall be used throughout the Villages at Cabrillo, including building entries, parking areas, seating areas, community open spaces, and circulation network.



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- **Light Pollution:** Lighting design and selected fixtures of proposed development shall provide adequate safety while minimizing light spillage and glare toward occupied spaces, habitat, and adjacent areas.

Compliance with the Specific Plan's development standards and outdoor lighting guidelines would ensure that buildout of the Specific Plan would minimize conflict areas and light spillage onto the SR-103 freeway. Therefore, due to compliance with existing state and local regulations and the Specific Plan's design requirements for outdoor lighting, the operation of the Specific Plan would not create a new source of substantial light or glare. Project impacts related to light and glare associated with operation of the Specific Plan would be less than significant.

#### 5.1.4 Cumulative Impacts

Aesthetic impacts are localized to the Plan Area and its immediate surroundings. Similar to the Specific Plan, other development projects would be required to comply with applicable state and local regulations, such as Title 24 (California Building Code) and applicable regulations from the LBMC and be consistent with the City's General Plan. Furthermore, the parcels adjacent to and surrounding the Plan Area are largely built out. Should new development be proposed for adjacent site, such development would be subject to adopted plans and regulations that are in place to preserve a community's visual character.

Due to the developed nature of the Plan Area surroundings and the presence of light and glare from adjacent properties and from vehicles along the SR-103, the Specific Plan is not anticipated to add significantly to the creation of light or glare. Additionally, the Specific Plan would comply with applicable LBMC lighting regulations, such as parking lot lighting and signage lighting. The Specific Plan's impacts would be less than significant and would not contribute to a cumulative impact.

#### 5.1.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: Impact 5.1-1 and Impact 5.1.2.

#### 5.1.6 Mitigation Measures

No mitigation measures are required.

#### 5.1.7 Level of Significance After Mitigation

Impact 5.1-1 and Impact 5.1-2 are less than significant prior to mitigation.

#### 5.1.8 References

Long Beach, City of. 2020, June 5. Municipal Code.

[https://library.municode.com/ca/long\\_beach/codes/municipal\\_code](https://library.municode.com/ca/long_beach/codes/municipal_code).

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2019, December. General Plan Urban Design Element.

[http://www.longbeach.gov/globalassets/lbds/media-](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/lueude/urban-design-element-final-adopted-december-2019)

[library/documents/planning/advance/lueude/urban-design-element-final-adopted-december-2019.](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/lueude/urban-design-element-final-adopted-december-2019)

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### 5.2 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Century Villages at Cabrillo Specific Plan (Specific Plan) to impact air quality in a local and regional context. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling for the Specific Plan is included in Appendix C of this DEIR. Transportation-sector impacts are based on trip generation and vehicle miles traveled, as provided by Fehr and Peers (see Appendix I). Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB).

#### 5.2.1 Environmental Setting

##### 5.2.1.1 AIR POLLUTANTS OF CONCERN

###### *Criteria Air Pollutants*

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb) are primary air pollutants. Of these, CO, SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. VOC and NO<sub>x</sub> are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants.

Each of the primary and secondary criteria air pollutants and its known health effects is described below.

- **Carbon Monoxide** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (South Coast AQMD 2005; USEPA 2020a). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2018).
- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The two major forms of NO<sub>x</sub> are nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO<sub>x</sub> produced by combustion is NO, but NO reacts quickly with oxygen to form NO<sub>2</sub>, creating the mixture of NO and NO<sub>2</sub> commonly called NO<sub>x</sub>. NO<sub>2</sub> is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO<sub>2</sub> is only potentially irritating. NO<sub>2</sub> absorbs blue light; the result is a brownish-

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red cast to the atmosphere and reduced visibility. NO<sub>2</sub> exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO<sub>2</sub> exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO<sub>2</sub> concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (South Coast AQMD 2005; USEPA 2020a). The SoCAB is designated an attainment area for NO<sub>x</sub> forms, including NO<sub>2</sub>, under the National and California AAQS (CARB 2018).

- **Sulfur Dioxide** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO<sub>2</sub>. When sulfur dioxide forms sulfates (SO<sub>4</sub>) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO<sub>x</sub>). Thus, SO<sub>2</sub> is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO<sub>2</sub> may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO<sub>2</sub>, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and amplified asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO<sub>2</sub> may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (South Coast AQMD 2005; USEPA 2020a). The SoCAB is designated attainment for SO<sub>x</sub> forms, including SO<sub>2</sub>, under the California and National AAQS (CARB 2018).
- **Suspended Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM<sub>10</sub>, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or PM<sub>2.5</sub>, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM<sub>10</sub> and PM<sub>2.5</sub> may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The U.S. Environmental Protection Agency's (EPA's) scientific review concluded that PM<sub>2.5</sub>, which penetrates deeply into the lungs, is more likely than PM<sub>10</sub> to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (South Coast AQMD 2005). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), have human health implications, because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2013). However, the EPA and the California Air Resources Board (CARB) have not adopted AAQS to regulate these particulates. Diesel particulate matter is classified

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by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,<sup>1</sup> environmental damage,<sup>2</sup> and aesthetic damage<sup>3</sup> (South Coast AQMD 2005; USEPA 2020a). The SoCAB is a nonattainment area for PM<sub>2.5</sub> under California and National AAQS and a nonattainment area for PM<sub>10</sub> under the California AAQS (CARB 2018).<sup>4</sup>

- **Ozone**, or O<sub>3</sub>, is a key ingredient of “smog” and is a gas that is formed when VOCs and NO<sub>x</sub>, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O<sub>3</sub> is a secondary criteria air pollutant. O<sub>3</sub> concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O<sub>3</sub> poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O<sub>3</sub> can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O<sub>3</sub> also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O<sub>3</sub> also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O<sub>3</sub> harms sensitive vegetation during the growing season (South Coast AQMD 2005; USEPA 2020a). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2018).
- **Volatile Organic Compounds** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (South Coast AQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O<sub>3</sub>, South Coast AQMD has established a significance threshold. The health effects for ozone are described above.
- **Lead** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005; USEPA 2020a). The major sources of lead emissions have historically been mobile and industrial sources. As a

<sup>1</sup> PM<sub>2.5</sub> is the main cause of reduced visibility (haze) in parts of the United States.

<sup>2</sup> Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

<sup>3</sup> Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

<sup>4</sup> CARB approved the South Coast AQMD’s request to redesignate the SoCAB from serious nonattainment for PM<sub>10</sub> to attainment for PM<sub>10</sub> under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM<sub>10</sub> standards from 2004 to 2007. The EPA approved the State of California’s request to redesignate the South Coast PM<sub>10</sub> nonattainment area to attainment of the PM<sub>10</sub> National AAQS, effective on July 26, 2013.

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result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.<sup>5</sup> As a result of these violations, the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2018). There are no lead-emitting sources associated with this project, and therefore, lead is not a pollutant of concern for the Specific Plan.

Table 5.2-1 summarizes the potential health effects associated with the criteria air pollutants.

**Table 5.2-1 Criteria Air Pollutant Health Effects Summary**

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	<ul style="list-style-type: none"> <li>Chest pain in heart patients</li> <li>Headaches, nausea</li> <li>Reduced mental alertness</li> <li>Death at very high levels</li> </ul>	Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O <sub>3</sub> ) Volatile Organic Compounds (VOC) <sup>1</sup>	<ul style="list-style-type: none"> <li>Cough, chest tightness</li> <li>Difficulty taking a deep breath</li> <li>Worsened asthma symptoms</li> <li>Lung inflammation</li> </ul>	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO <sub>2</sub> ) <sup>2</sup>	<ul style="list-style-type: none"> <li>Increased response to allergens</li> <li>Aggravation of respiratory illness</li> </ul>	Same as carbon monoxide sources
Particulate Matter (PM <sub>10</sub> & PM <sub>2.5</sub> )	<ul style="list-style-type: none"> <li>Hospitalizations for worsened heart diseases</li> <li>Emergency room visits for asthma</li> <li>Premature death</li> </ul>	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO <sub>2</sub> )	<ul style="list-style-type: none"> <li>Aggravation of respiratory disease (e.g., asthma and emphysema)</li> <li>Reduced lung function</li> </ul>	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	<ul style="list-style-type: none"> <li>Behavioral and learning disabilities in children</li> <li>Nervous system impairment</li> </ul>	Contaminated soil

Source: CARB 2009; South Coast AQMD 2005.

Notes:

<sup>1</sup> Because VOC is secondary pollutant and is primarily associated with the formation of ozone (O<sub>3</sub>), health effects associated with VOC are encompassed in the health effects described for ozone.

<sup>2</sup> The health effects described for NO<sub>2</sub> are also applicable to NO<sub>x</sub> in general, as NO<sub>x</sub> encompasses both NO and NO<sub>2</sub>.

<sup>5</sup> Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (South Coast AQMD 2012).

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#### *Toxic Air Contaminants*

People exposed to toxic air pollutants (TACs) at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems (USEPA 2020b). By the December 1999 update to the TAC list, CARB had designated 244 compounds as TACs (CARB 1999). Subsequently, the list was updated in 2007 to include Environmental Tobacco Smoke (CARB 2020b). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. There are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most relevant to the project being particulate matter from diesel-fueled engines.

#### *Diesel Particulate Matter*

In 1998, CARB identified diesel particulate matter (DPM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. Long-term (chronic) inhalation of DPM is likely a lung cancer risk. Short-term (i.e., acute) exposure can cause irritation and inflammatory systems and may exacerbate existing allergies and asthma systems (USEPA 2002).

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

#### **5.2.1.2 REGULATORY BACKGROUND**

AAQS have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of TACs. The Plan Area is in the SoCAB and is subject to the rules and regulations imposed by the South Coast AQMD as well as the California AAQS adopted by CARB and National AAQS adopted by the EPA. Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Specific Plan are summarized in this section.

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#### Federal and State

##### *Ambient Air Quality Standards*

The National Clean Air Act was passed in 1963 by the US Congress and has been amended several times. The 1970 National Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The National Clean Air Act allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.2-2. These pollutants are ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

**Table 5.2-2 Ambient Air Quality Standards for Criteria Air Pollutants**

Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
Ozone (O <sub>3</sub> ) <sup>3</sup>	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	



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Table 5.2-2 Ambient Air Quality Standards for Criteria Air Pollutants

Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Respirable Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>4</sup>	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m <sup>3</sup>	
Lead (Pb)	30-Day Average	1.5 µg/m <sup>3</sup>	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m <sup>3</sup>	
	Rolling 3-Month Average	*	0.15 µg/m <sup>3</sup>	
Sulfates (SO <sub>4</sub> ) <sup>5</sup>	24 hours	25 µg/m <sup>3</sup>	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo = 0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H <sub>2</sub> S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

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**Table 5.2-2 Ambient Air Quality Standards for Criteria Air Pollutants**

Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
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Source: CARB 2016.  
Notes: ppm: parts per million; µg/m<sup>3</sup>: micrograms per cubic meter  
\* Standard has not been established for this pollutant/duration by this entity.  
<sup>1</sup> California standards for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.  
<sup>2</sup> National standards (other than O<sub>3</sub>, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.  
<sup>3</sup> On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.  
<sup>4</sup> On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.  
<sup>5</sup> On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions:

- **AB 1493: Pavley Fuel Efficiency Standards.** Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.
- **SB 1078 and SB 107: Renewables Portfolio Standards.** A major component of California's Renewable Energy Program is the renewables portfolio standard (RPS) established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010.
- **California Code of Regulations (CCR), Title 20: Appliance Energy Efficiency Standards.** The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances.
- **24 CCR, Part 6: Building and Energy Efficiency Standards.** Energy conservation standards for new residential and non-residential buildings adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977.
- **24 CCR, Part 11: Green Building Standards Code.** Establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.<sup>6</sup>

<sup>6</sup> The green building standards became mandatory in the 2010 edition of the code.

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#### *Tanner Air Toxics Act and Air Toxics Hot Spot Information and Assessment Act*

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and reduce exposure to them. The California Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health” (17 CCR § 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code § 7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate “toxics best available control technology” to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR § 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.** Generally restricts on-road diesel-powered commercial motor vehicles with a gross vehicle weight rating of greater than 10,000 pounds from idling more than five minutes.
- **13 CCR § 2480: Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools.** Generally restricts a school bus or transit bus from idling for more than five minutes when within 100 feet of a school.
- **13 CCR § 2477 and Article 8: Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate.** Regulations established to control emissions associated with diesel-powered TRUs.
- **13 CCR § 2020, 2021, 2021.1, 2021.2: Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Diesel-Fueled Residential and Commercial Solid Waste Collection Vehicles.** Regulations established to control and reduce emissions from solid waste collection vehicles.

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#### Regional

##### *Air Quality Management Planning*

South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared. The 2016 AQMP is the current document. South Coast AQMD is in the process of preparing the 2022 update to the AQMP.

##### ***2016 AQMP***

On March 3, 2017, South Coast AQMD adopted the 2016 AQMP, which serves as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 National 8-hour ozone standard by 2031
- 2012 National annual PM<sub>2.5</sub> standard by 2025<sup>7</sup>
- 2006 National 24-hour PM<sub>2.5</sub> standard by 2019
- 1997 National 8-hour ozone standard by 2023
- 1979 National 1-hour ozone standard by year 2022

It is projected that total NO<sub>x</sub> emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (South Coast AQMD 2017), which requires reducing NO<sub>x</sub> emissions in the SoCAB to 250 tpd. This is approximately 45 percent additional reductions above existing regulations for the 2023 ozone standard and 55 percent additional reductions to existing regulations to meet the 2031 ozone standard.

Reducing NO<sub>x</sub> emissions would also reduce PM<sub>2.5</sub> concentrations in the SoCAB. However, because the goal is to meet the 2012 federal annual PM<sub>2.5</sub> standard no later than year 2025, South Coast AQMD is seeking to reclassify the SoCAB from “moderate” to “serious” nonattainment under this federal standard. A “moderate” nonattainment would require meeting the 2012 federal standard by no later than 2021.

Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (South Coast AQMD 2017).

##### ***Lead Implementation Plan***

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead (Pb) classification due to the addition of source-specific monitoring under the new federal

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<sup>7</sup> The 2016 AQMP requests a reclassification from moderate to serious nonattainment for the 2012 National PM<sub>2.5</sub> standard.

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regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded the new standard in the 2007-to-2009 period. The remainder of the SoCAB, outside the Los Angeles County nonattainment area, remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the State Implementation Plan (SIP) revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval.

#### *South Coast AQMD Rules and Regulations*

All projects are subject to South Coast AQMD rules and regulations in effect at the time of activity, including:

- **Rule 401, Visible Emissions.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark as or darker than designated No. 1 on the Ringelmann Chart, as published by the US Bureau of Mines.
- **Rule 402, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities. In general, the rule prohibits new developments from the installation of wood-burning devices.
- **Rule 445, Wood Burning Devices.** This rule is intended to reduce the emission of particulate matter from wood-burning devices and applies to manufacturers and sellers of wood-burning devices, commercial sellers of firewood, and property owners and tenants that operate a wood-burning device.
- **Rule 1113, Architectural Coatings.** This rule serves to limit the VOC content of architectural coatings used on projects in the South Coast AQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the South Coast AQMD must comply with the current VOC standards set in this rule.
- **Rule 1403, Asbestos Emissions from Demolition/Renovation Activities.** The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation

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activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

#### 5.2.1.3 EXISTING CONDITIONS

##### South Coast Air Basin

The Plan Area is in the SoCAB, which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (South Coast AQMD 2005).

##### Meteorology

###### *Temperature and Precipitation*

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the Plan Area that best represents the climatological conditions of the project area is the Long Beach, California Monitoring Station (ID 045082). The average low is reported at 44.8°F in January, and the average high is 80.7°F in August (WRCC 2020).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through May. Rainfall averages 12.72 inches per year in the vicinity of the Plan Area (WRCC 2020).

###### *Humidity*

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of a shallow marine layer. This "ocean effect" is dominant except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds. Periods of heavy fog are frequent, especially along the coast. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (South Coast AQMD 1993).

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#### *Wind*

Wind patterns across the southern coastal region are characterized by westerly or southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east inhibit the eastward transport and diffusion of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (South Coast AQMD 2005).

#### *Inversions*

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the “mixing height.” The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (South Coast AQMD 2005).

#### **SoCAB Nonattainment Areas**

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- ***Unclassified.*** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- ***Attainment.*** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- ***Nonattainment.*** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area. What constitutes a violation is dependent on the criteria air pollutant and ranges from no exceedances allowed, to no more than one exceedance per year to readings based on a three-year period.
- ***Nonattainment/Transitional.*** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

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The attainment status for the SoCAB is shown in Table 5.2-3.

**Table 5.2-3 Attainment Status of Criteria Air Pollutants in the South Coast Air Basin**

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM <sub>10</sub>	Serious Nonattainment	Attainment
PM <sub>2.5</sub>	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO <sub>2</sub>	Attainment	Attainment/Maintenance
SO <sub>2</sub>	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only) <sup>1</sup>
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2018.

<sup>1</sup> In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas in the SoCAB are unclassified.

### Multiple Air Toxics Exposure Study IV

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on existing ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In 2008, South Coast AQMD conducted its third update, MATES III, based on the Office of Environmental Health Hazards Assessment's (OEHHA) 2003 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (2003 HRA Guidance Manual). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, which accounted for 84 percent of the cancer risk (South Coast AQMD 2008a).

South Coast AQMD recently released the fourth update, MATES IV, which was also based on OEHHA's 2003 HRA Guidance Manual. The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources, and 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, which accounted for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basin-wide population-weighted risk decreased by approximately 57 percent since MATES III (South Coast AQMD 2015a).

The Office of Environmental Health Hazard Assessment (OEHHA) updated the guidelines for estimating cancer risks on March 6, 2015. The new method utilizes higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined together, South Coast AQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed updated



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methods identified in MATES IV (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (South Coast AQMD 2015a).

### Existing Ambient Air Quality

Existing ambient air quality, historical trends, and projections in the vicinity of the Plan Area are best documented by measurements made by South Coast AQMD. The Plan Area lies within Source Receptor Area (SRA) 4 (South Los Angeles County Coastal). The air quality monitoring station closest to the Plan Area is the Long Beach Webster Street Monitoring Station. However, because this station does not monitor for PM<sub>2.5</sub>, data for this criteria air pollutant is obtained from the North Long Beach Monitoring Station. Data from these stations are summarized in Table 5.2-4. The data show that the area has regularly exceeded the state PM<sub>10</sub> and the federal PM<sub>2.5</sub> standards.

**Table 5.2-4 Ambient Air Quality Monitoring Summary**

Pollutant/Standard <sup>1</sup>	Number of Days Thresholds Were Exceeded and Maximum Levels <sup>1,2</sup>				
	2014	2015	2016	2017	2018
<b>Ozone (O<sub>3</sub>)<sup>1</sup></b>					
State 1-Hour $\geq 0.09$ ppm (days exceed threshold)	0	0	0	0	0
State 8-hour $\geq 0.07$ ppm (days exceed threshold)	1	0	0	0	0
Federal 8-Hour $> 0.075$ ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.087	0.087	0.079	0.082	0.074
Max. 8-Hour Conc. (ppm)	0.072	0.067	0.059	0.069	0.064
<b>Nitrogen Dioxide (NO<sub>2</sub>)<sup>2</sup></b>					
State 1-Hour $\geq 0.18$ ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.1359	0.1018	0.0756	0.0895	0.0853
<b>Coarse Particulates (PM<sub>10</sub>)<sup>2</sup></b>					
State 24-Hour $> 50$ $\mu\text{g}/\text{m}^3$ (days exceed threshold)	3	6	8	10	4
Federal 24-Hour $> 150$ $\mu\text{g}/\text{m}^3$ (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. ( $\mu\text{g}/\text{m}^3$ )	84.0	80.0	75.0	79.0	84.0
<b>Fine Particulates (PM<sub>2.5</sub>)<sup>3</sup></b>					
Federal 24-Hour $> 35$ $\mu\text{g}/\text{m}^3$ (days exceed threshold)	2	3	0	4	6
Max. 24-Hour Conc. ( $\mu\text{g}/\text{m}^3$ )	51.5	54.6	29.3	55.3	79.6

Source: CARB 2020a.

Notes: ppm = parts per million; ppb = parts per billion;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter; \* = Data not available

<sup>1</sup> The CARB iADAM Air Quality Data Statistics does not provide data for lead.

<sup>2</sup> Data obtained from the Long Beach Webster Street Monitoring Station for O<sub>3</sub>, NO<sub>2</sub>, and PM<sub>10</sub>.

<sup>3</sup> Data obtained from the North Long Beach Monitoring Station for PM<sub>2.5</sub>.

### Existing Emissions

The existing uses within the Plan Area currently generates criteria air pollutant emissions from natural gas use for energy, heating and cooking, vehicle trips associated with residents, employees, vendors, and visitors, and area sources such as landscaping equipment and consumer cleaning products. Table 5.2-5 summarizes emissions associated with the daily operations of these existing land uses using emission rates for years 2020 (current conditions) and 2033 (future conditions). The Year 2020 inventory represents the projected emissions generated currently by the existing land uses based on calendar year 2020 emission factors for on-road vehicles. The Year

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2033 inventory represents the projected emissions that the existing land uses would generate in the future utilizing calendar year 2033 emission factors for on-road vehicles. To isolate the impacts related to the change in land uses proposed by the Specific Plan, the net change in emissions related implementation of the Specific Plan is based on the difference in emissions generated by the existing and proposed land uses under year 2033 conditions. This approach is taken as existing land uses would be subject to regulations that come into effect in the future that reduce mobile-source emissions. Thus, the level of emissions the existing land uses generate today would not be generated in perpetuity, but would be affected by these state regulations.

**Table 5.2-5 Plan Area Existing Criteria Air Pollutant Emissions**

Phase	Operation-Related Regional Emissions (pounds/day) <sup>1</sup>					
	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Year 2020</b>						
Area	16	1	72	<1	<1	<1
Energy <sup>2</sup>	<1	3	1	<1	<1	<1
Mobile <sup>3</sup>	11	24	149	<1	35	10
<b>Total</b>	<b>28</b>	<b>27</b>	<b>222</b>	<b>&lt;1</b>	<b>36</b>	<b>10</b>
<b>Year 2033</b>						
Area	16	1	71	<1	<1	<1
Energy <sup>2</sup>	<1	3	1	<1	<1	<1
Mobile <sup>4</sup>	6	11	75	<1	35	9
<b>Total</b>	<b>22</b>	<b>14</b>	<b>147</b>	<b>&lt;1</b>	<b>36</b>	<b>10</b>

Sources: CalEEMod Version 2016.3.2.25.

Notes: Based on highest winter or summer emissions.

<sup>1</sup> Includes only those pollutants in which South Coast AQMD have established regional significance thresholds and that are applicable. Thus, emissions data for ozone and lead are omitted. Additionally, because the proposed project does not involve a large permitted industrial project where South Coast AQMD is the lead agency, lead (Pb) is not a pollutant of concern.

<sup>2</sup> Utilizes CalEEMod historical energy rates, which are based on the 2005 Building Energy Efficiency Standards.

<sup>3</sup> Based on calendar year 2020 emission rates obtained from EMFAC2017, Version 1.0.2., and adjusted based on CalEEMod methodology for vehicle emission rates.

<sup>4</sup> Based on calendar year 2033 emission rates obtained from EMFAC2017, Version 1.0.2., and adjusted based on CalEEMod methodology for vehicle emission rates.

### Sensitive Receptors

Some land uses are considered more sensitive to air pollution (i.e., toxic air contaminants) than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

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As shown in Figure 3, *Aerial Photograph*, the nearest off-site sensitive receptor to the Plan Area is the adjacent Cabrillo High School to the north and east. Beyond the high school campus are residences north of West Hill Street and east of Santa Fe Avenue.

### 5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
- AQ-3 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold AQ-4

This impact will not be addressed in the following analysis.

#### 5.2.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. South Coast AQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation based on substantial evidence.

#### Regional Significance Thresholds

South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB, shown in Table 5.2-6. The table lists thresholds that are applicable for all projects uniformly, regardless of size or scope. There is growing evidence that although ultrafine particulate matter contributes a very small portion of the overall atmospheric mass concentration, it represents a greater proportion of the health risk from PM. However, the EPA and CARB have not adopted AAQS to regulate ultrafine particulate matter; therefore, South Coast AQMD has not developed thresholds for them.

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**Table 5.2-6 South Coast AQMD Significance Thresholds**

Air Pollutant <sup>1</sup>	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO <sub>x</sub> )	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO <sub>x</sub> )	150 lbs/day	150 lbs/day
Particulates (PM <sub>10</sub> )	150 lbs/day	150 lbs/day
Particulates (PM <sub>2.5</sub> )	55 lbs/day	55 lbs/day

Source: South Coast AQMD 2019.

<sup>1</sup> The South Coast AQMD has not developed a regional significance threshold for ozone. In addition, because the proposed project does not involve a large permitted industrial project where South Coast AQMD is the lead agency, lead (Pb) is not a pollutant of concern.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health effects. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Increases cancer risk (PM<sub>2.5</sub>, TACs)
- Aggravates respiratory disease (O<sub>3</sub>, PM<sub>2.5</sub>)
- Increases bronchitis (O<sub>3</sub>, PM<sub>2.5</sub>)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O<sub>3</sub>)
- Reduces resistance to infections and increases fatigue (O<sub>3</sub>)
- Reduces lung growth in children (PM<sub>2.5</sub>)
- Contributes to heart disease and heart attacks (PM<sub>2.5</sub>)
- Contributes to premature death (O<sub>3</sub>, PM<sub>2.5</sub>)
- Contributes to lower birth weight in newborns (PM<sub>2.5</sub>) (South Coast AQMD 2000)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of PM<sub>2.5</sub> is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists, in a landmark children's health study, found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015b).

South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB and has established thresholds that would be protective of these individuals. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS. Mass emissions in Table 5.2-6 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. The thresholds are based on the trigger levels for the federal New Source Review (NSR) Program. The NSR Program was created to ensure projects are consistent with attainment of health-based federal AAQS. Regional emissions from a single project do not single-handedly trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health

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effects listed above. Projects that do not exceed the South Coast AQMD regional significance thresholds in Table 5.2-6 would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emissions in Table 5.2-6, emissions would cumulatively contribute to the nonattainment status and would contribute in elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions in Table 5.2-6, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited above.

South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Sierra Club v. County of Fresno* (Friant Ranch) (2018) 6 Cal.5th 502, Case No. S21978. In Friant Ranch, the California Supreme Court determined that the EIR for the proposed Friant Ranch project failed to adequately analyze the project's air quality impacts on human health. The EIR prepared for the project, a master planned retirement community in Fresno County, showed that project-related mass emissions would exceed the San Joaquin Valley Air Pollution Control District's regional significance thresholds. In its findings, the California Supreme Court affirmed the holding of the Court of Appeal that EIRs for projects must not only identify impacts to human health, but also provide an "analysis of the correlation between the project's emissions and human health impacts" related to each criteria air pollutant that exceeds the regional significance thresholds or explain why it could not make such a connection. In general, the ruling focuses on the correlation of emissions of toxic air contaminants and criteria air pollutants and their impact to human health.

Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National AAQS and California AAQS, it is not feasible to link health risks to the magnitude of emissions exceeding the significance thresholds. However, if a project in the SoCAB exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time the attainment standard are met in the SoCAB.

### CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is

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highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction of cleaner fuels, as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for the attainment by South Coast AQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.<sup>8</sup> As identified in South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in years before redesignation were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection (South Coast AQMD 1992; South Coast AQMD 2003). Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017).<sup>9</sup>

### Localized Significance Thresholds

The South Coast AQMD identifies localized significance thresholds shown in Table 5.2-7. Emissions of NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> generated at a project site (offsite mobile-source emissions are not included in the LST analysis) could expose sensitive receptors to substantial concentrations of criteria air pollutants. A project that generates emissions that trigger a violation of the AAQS when added to the local background concentrations would generate a significant impact.

**Table 5.2-7 South Coast AQMD Localized Significance Thresholds**

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO <sub>2</sub> Standard (CAAQS)	0.18 ppm
Annual NO <sub>2</sub> Standard (CAAQS)	0.03 ppm
24-Hour PM <sub>10</sub> Standard – Construction (South Coast AQMD) <sup>1</sup>	10.4 µg/m <sup>3</sup>
24-Hour PM <sub>2.5</sub> Standard – Construction (South Coast AQMD) <sup>1</sup>	10.4 µg/m <sup>3</sup>
24-Hour PM <sub>10</sub> Standard – Operation (South Coast AQMD) <sup>1</sup>	2.5 µg/m <sup>3</sup>
24-Hour PM <sub>2.5</sub> Standard – Operation (South Coast AQMD) <sup>1</sup>	2.5 µg/m <sup>3</sup>
Annual Average PM <sub>10</sub> Standard (South Coast AQMD) <sup>1</sup>	1.0 µg/m <sup>3</sup>

<sup>8</sup> The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

<sup>9</sup> The CO hotspot analysis refers to the modeling conducted by the Bay Area Air Quality Management District for its CEQA Guidelines because it is based on newer data and considers the improvement in mobile-source CO emissions. Although meteorological conditions in the Bay Area differ from those in the Southern California region, the modeling conducted by BAAQMD demonstrates that the net increase in peak hour traffic volumes at an intersection in a single hour would need to be substantial. This finding is consistent with the CO hotspot analysis South Coast AQMD prepared as part of its 2003 AQMP to provide support in seeking CO attainment for the SoCAB. Based on the analysis prepared by South Coast AQMD, no CO hotspots were predicted for the SoCAB. As noted in the preceding footnote, the analysis included some of Los Angeles' busiest intersections, with daily traffic volumes of 100,000 or more peak hour vehicle trips operating at LOS E and F.

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Air Pollutant (Relevant AAQS)	Concentration
Source: South Coast AQMD 2019. ppm – parts per million; $\mu\text{g}/\text{m}^3$ – micrograms per cubic meter	
<sup>1</sup> Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for $\text{PM}_{10}$ and $\text{PM}_{2.5}$ , the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.	

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5.2-7 for projects under five acres. These “screening-level” LSTs tables are the localized significance thresholds for all projects of five acres and less; however, they can be used as screening criteria for larger projects to determine whether dispersion modeling may be required.

The construction screening-level LSTs in SRA 4 are shown in Table 5.2-8. For construction activities, the screening-level LSTs are based on the distance to the nearest sensitive receptors and the acreage disturbed per day based on equipment use (South Coast AQMD 2011). For purposes of this analysis, the screening-level LSTs are based on the reference distance of 82 feet (25 meters) and acreage disturbed of 3.36 acres. The distance of 82 feet is the minimum referenced distance per South Coast AQMD LST methodology and is utilized as the nearest sensitive receptors would be the onsite residents that could surround a development accommodated under the Specific Plan (South Coast AQMD 2008b). The 3.36 acreage disturbed is based on the 1.12-acre project site for Phase A multiplied by three to account for the assumption that up to three development phases could occur concurrently.

**Table 5.2-8 South Coast AQMD Screening-Level Localized Significance Thresholds: Construction**

Acreage Disturbed	Threshold (lbs/day) <sup>1</sup>			
	Nitrogen Oxides (NO <sub>x</sub> )	Carbon Monoxide (CO)	Coarse Particulates (PM <sub>10</sub> )	Fine Particulates (PM <sub>2.5</sub> )
3.36 Acres Disturbed Per Day <sup>2</sup>	101	1,154	10	6

Source: South Coast AQMD 2008b and South Coast AQMD 2011, Based on receptors in SRA 4.

<sup>1</sup> Screening-level LSTs are based on receptors within 82 feet (25 meters).

<sup>2</sup> Based on the 1.12-acre project site for Phase A multiplied by three to account for the assumption that up to three development phases could occur concurrently.

**Health Risk**

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD Rule 1401, placed on CARB’s air toxics list pursuant to AB 1807, or placed on the EPA’s National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 5.2-9 lists the TAC incremental risk thresholds for operation of a project. The types of land uses that typically generate substantial quantities of criteria air pollutants and TACs from operations include industrial (stationary sources) and warehousing (truck idling) land uses. Residential, commercial, and office uses do not use substantial quantities of TACs, thus these thresholds are typically applied to new industrial projects only. Additionally, the purpose of this environmental evaluation is to identify the significant effects of the Specific Plan on the environment, not the significant effects of the environment on the Specific Plan. *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478). However, the environmental document must analyze the impacts of environmental hazards on future users

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when a proposed project exacerbates an existing environmental hazard or condition. As stated, because residential, commercial, and office uses do not use substantial quantities of TACs, they typically do not exacerbate existing hazards.

**Table 5.2-9 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds**

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 0.5 excess cancer cases
Hazard Index (project increment)	≥ 1.0

Source: South Coast AQMD 2019.

### 5.2.3 Environmental Impacts

#### 5.2.3.1 METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the Specific Plan. South Coast AQMD's *CEQA Air Quality Handbook* (Handbook) and updates on its website are intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs, and they were used in this analysis (South Coast AQMD 1993). The following provides a summary of the assumptions utilized for the Specific Plan analysis.

#### Operational Phase

- **Transportation:** Based on the weekday daily trip generation and vehicle miles traveled (VMT) data provided by Fehr and Peers (see Appendix I of this DEIR). Additionally, the analysis also utilizes the Saturday and Sunday daily trip generation rates as provided in the 10th Edition Trip Generation Manual Handbook (ITE 2017). Year 2020 and 2033 on-road criteria air pollutant emissions are based on calendar year 2020 and 2033 emission rates, respectively, obtained from EMFAC2017 (v. 1.0.2) and adjusted based on CalEEMod methodology.
- **Area Sources:** Area sources generated from use of consumer products and cleaning supplies are based on CalEEMod default emission rates and on the assume building square footages. Additionally, existing and proposed dwelling units are modeled without fireplaces.
- **Energy:** Criteria air pollutant emissions from energy use (natural gas used for cooking, heating, etc.) are based on the CalEEMod defaults for natural gas usage by residential and nonresidential land uses. The CalEEMod historical energy rates, which are based on the 2005 Building Energy Efficiency Standards, are utilized for the existing buildings. New buildings are assumed to comply with the 2019 Building Energy Efficiency Standards and are modeled to be one percent more energy efficient for natural gas compared to the 2016 Building Energy Efficiency Standards (NORESO 2018). Under the California Building and Energy Standards, residential buildings that are four stories and higher fall under the non-residential standards.



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#### Construction Phase

Development of the Specific Plan is anticipated to commence in year 2023 and occur over an anticipated 12 development phases over a 10-year period. Each of the development phases are anticipated to last approximately 20 months. Due to the programmatic nature of the Specific Plan, construction emissions are quantified for a single development phase that represents the worst-case scenario for an individual development phase. This worst-case phase is used to represent the emissions that could be generated by the other anticipated development phases accommodated under the Specific Plan. This worst-case scenario generally accounts for the largest amount of demolition and grading hauling activities and amount of development that could occur within a given development phase. Table 5.2-10 shows the anticipated construction activities, phasing, and equipment mix for each of the activities for this scenario. The construction schedule utilized in the analysis represents a “worst-case” analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. The modeling considers overlapping construction activities where applicable (e.g., architectural coating and asphalt demolition).

**Table 5.2-10 Construction Activities, Phasing and Equipment: Worst-Case Development Phase**

Activities <sup>1</sup>	Start/End Dates <sup>1</sup>	Off-Road Equipment <sup>1, 2</sup>
Building Demolition	03/01/2023 to 05/23/2023	2 Excavators, 2 Skid Steer Loaders, & 1 Tractor/Loader/Backhoe
Building Demolition Haul	04/01/2023 to 05/26/2023	No additional equipment from building demolition activity
Site Preparation	06/01/2023 to 06/07/2023	1 Grader, 1 Rubber Tired Dozer, & 1 Tractor/Loader/Backhoe
Site Preparation Soil Haul	06/01/2023 to 06/14/2023	No additional equipment from site preparation activity
Rough Grading	06/09/2023 to 06/22/2023	1 Grader, 1 Rubber Tired Dozer, & 1 Tractor/Loader/Backhoe
Geopiers/Extra Foundation Preparation	07/01/2023 to 09/22/2023	1 B27 Electric Vibroflot, 1 Crane, 1 Tractor/Loader/Backhoe, & 1 Generator Set
Utility Trenching	08/01/2023 to 10/23/2023	1 Excavator & 1 Trencher
Building Construction	10/15/2023 to 05/24/2024	1 Crane, 1 Forklift, 1 Generator Set, 1 Tractor/Loader/Backhoe
Architectural Coating	06/01/2024 to 08/23/2024	1 Air Compressor
Asphalt Demolition	07/01/2024 to 07/05/2024	2 Excavators, 2 Skid Steer Loaders, & 1 Tractor/Loader/Backhoe
Asphalt Demolition Haul	07/01/2024 to 07/05/2024	No additional equipment from asphalt demolition activity
Asphalt Paving	08/24/2024 to 09/20/2024	1 Cement and Mortar Mixer, 1 Paver, 1 Paving Equipment, 1 Roller, & 1 Tractor/Loader/Backhoe
Fine Grading	09/23/2024 to 09/27/2024	1 Grader, 1 Rubber Tired Dozer, & 1 Tractor/Loader/Backhoe
Finishing/Landscaping	10/01/2024 to 11/25/2024	1 Forklift

Notes:

<sup>1</sup> Based on information provided, anticipated, and CalEEMod defaults.

<sup>2</sup> Two water trucks are assumed for the building demolition, site preparation, rough grading, geopiers/extra foundation preparation, asphalt demolition, and fine grading activities.

The anticipated construction schedules for each of the Specific Plan development phases are shown in Table 5.2-11. As shown in the table, it is anticipated that buildout of the proposed Specific Plan would be implemented in multiple phases in response to evolving funding opportunities and logistic constraints. However, although overall development would be subject to demand and market conditions, for purposes of

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this analysis, it is assumed that up to three development phases could occur concurrently at any one time during the 10-year buildout window based on the development schedule anticipated.

**Table 5.2-11 Specific Plan Development Phase Schedule**

Development Phase <sup>1</sup>	Construction Schedule <sup>1</sup>
Phase A	March 2023 to November 2024
Phase B	January 2024 to September 2025
Phase C	November 2024 to July 2026
Phase D	September 2025 to May 2027
Phase E	January 2027 to February 2028
Phase F	November 2027 to December 2028
Phase G	March 2028 to November 2029
Phase H	January 2029 to September 2030
Phase I	November 2029 to July 2031
Phase J	September 2030 to May 2032
Phase K	July 2031 to March 2033
Phase L	May 2032 to July 2033

Notes:

<sup>1</sup> Based on information provided by City Fabrick.

#### 5.2.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.2-1: The Specific Plan is consistent with the applicable air quality management plan. [Threshold AQ-1]**

**Impact Analysis:** The following describes potential air quality impacts and consistency with the AQMP from the implementation of the Specific Plan.

South Coast AQMD is directly responsible for reducing emissions from area, stationary, and mobile sources in the SoCAB to achieve the National and California AAQS. South Coast AQMD has responded to this requirement by preparing an AQMP. On March 3, 2017, the South Coast AQMD Governing Board adopted the 2016 AQMP, which is a regional and multiagency effort (South Coast AQMD, CARB, SCAG, and EPA). A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMP.

The two principal criteria for conformance with an AQMP are:

1. Whether the project would exceed the assumptions in the AQMP.

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2. Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timeline attainment of air quality standards.

SCAG is South Coast AQMD's partner in the preparation of the AQMP, providing the latest economic and demographic forecasts and developing transportation measures. Regional population, housing, and employment projects developed by SCAG are based, in part, on a city's general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP and are incorporated into the regional transportation plan/sustainable communities strategy (RTP/SCS) prepared by SCAG to determine priority transportation projects and vehicle miles traveled (VMT) in the SCAG region. Because the AQMP strategy is based on projections from local general plans, projects that are consistent with the local general plan are considered consistent with the air quality-related regional plan. Additionally, only large projects have the potential to substantially affect the demographic forecasts in the AQMP.

#### Criterion 1

CEQA Guidelines Section 15206(b) states that a proposed project is of statewide, regional, or area-wide significance if the project is a residential development of more than 500 dwelling units, a commercial office building of 250,000 square feet or more or that employs 1,000 or more employees, and/or a shopping center of 500,000 square feet or more. The amount of commercial and retail space accommodated under the Specific Plan would not exceed the commercial and retail screening criteria. However, the Specific Plan would introduce a net increase of approximately 515 new dwelling units; thus, it is a project of statewide, regional, or area-wide significance. As described in Section 5.11, *Population and Housing*, and shown in Table 5.11-7 on page 5.11-8, *Estimated Population Housing Growth Trend in Long Beach with Specific Plan Buildout*, the Specific Plan would be within the population projection for the City based on SCAG growth projections. Thus, implementation of the Specific Plan would not substantially affect demographic projections beyond what is accounted for in the current 2016 AQMP. Therefore, the Specific Plan would not be considered inconsistent with the AQMP under the first criterion.

#### Criterion 2

With respect to the second criterion, the analyses in the response to Impact 5.2-3 demonstrate that the Specific Plan would not generate long-term emissions of criteria air pollutants that would exceed South Coast AQMD's regional operation-phase significance thresholds, which were established to determine whether a project has the potential to cumulatively contribute to the SoCAB's nonattainment designations. Thus, long-term implementation of the Specific Plan would not result in an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of the AAQS. Therefore, overall, the Specific Plan would be considered consistent with the AQMP under the second criterion.

#### Summary

The Specific Plan would not result in generating long-term criteria air pollutant emissions in exceedance of the South Coast AQMD's regional operational significance thresholds (see Table 5.2-13) and would not cumulatively contribute to the nonattainment designations in the SoCAB. Additionally, implementation of the Specific Plan would not substantially affect the population estimates for the City and the population estimate

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assumed in the 2016 AQMP. Therefore, the Specific Plan would be considered consistent with the AQMP; and impacts would be less than significant.

**Impact 5.2-2:** Construction activities associated with the Specific Plan could generate short-term emissions that would exceed South Coast AQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the South Coast Air Basin (SoCAB). [Threshold AQ-2]

**Impact Analysis:** Construction activities would temporarily increase PM<sub>10</sub>, PM<sub>2.5</sub>, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and CO regional emissions in the SoCAB. The primary source of NO<sub>x</sub>, CO, and SO<sub>x</sub> emissions is the operation of construction equipment. The primary sources of particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions are activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary source of VOC emissions is the application of architectural coating and off-gas emissions associated with asphalt paving. A discussion of health impacts associated with air pollutant emissions generated by construction activities is included in Section 5.2.1.1, *Air Pollutants of Concern*.

As discussed in Section 3.4.6, *Project Phasing and Construction*, of this DEIR, based on the anticipated development phasing shown below, it is assumed up to three development phases could be overlapping at any given time. An estimate of maximum daily construction emissions is provided in Table 5.2-12. The table shows the highest daily emissions that would be generated over the worst-case individual development phase. This worst-case individual development phase emissions are based on the construction assumptions shown previously in Table 5.2-9, *Construction Activities, Phasing and Equipment: Worst-Case Development Phase*. Additionally, it also shows the highest daily emissions for the combined scenario. This combined scenario assumes two levels of overlap. It assumes the individual construction activities (i.e., building demolition, grading, etc.) would all overlap. Furthermore, it also assumes the concurrent development of three development phases. As stated, the emissions associated with the worst-case individual development phase is utilized as a proxy for each of the three development phases. In addition, because it is not anticipated that three development phases would be implemented during years 2023 and 2024, and emissions associated with construction equipment and vehicles generally improve with each passing year due to emissions regulations, maximum daily emissions for the combined scenario shown in Table 5.2-12 are considered to be conservative estimates.

**Table 5.2-12 Maximum Daily Regional Construction Emissions Estimate**

Construction Phase(s)	Criteria Air Pollutants (pounds per day) <sup>1,2</sup>					
	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Worst-Case Individual Development Phase</b>						
Building Demolition	1	8	13	<1	1	<1
Building Demolition & Building Demolition Haul	1	9	14	<1	1	<1
Site Preparation & Site Preparation Haul	1	15	8	<1	3	2
Site Preparation Haul	<1	2	1	<1	<1	<1
Site Preparation Haul & Rough Grading	1	13	7	<1	3	2
Rough Grading	1	11	6	<1	3	2
Geopiers/Extra Foundation Preparation	1	11	9	<1	1	<1

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Table 5.2-12 Maximum Daily Regional Construction Emissions Estimate

Construction Phase(s)	Criteria Air Pollutants (pounds per day) <sup>1, 2</sup>					
	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Geopiers/Extra Foundation Preparation & Utility Trenching	2	17	17	<1	2	1
Utility Trenching	1	6	7	<1	1	<1
Utility Trenching & Building Construction	3	20	24	<1	3	1
Building Construction (Year 2023)	2	15	17	<1	2	1
Building Construction (Year 2024)	2	14	17	<1	2	1
Architectural Coating	19	2	3	<1	<1	<1
Architectural Coating, Asphalt Demolition, & Asphalt Demolition Haul	20	12	16	<1	3	1
Asphalt Paving	1	7	10	<1	1	<1
Fine Grading	1	10	6	<1	3	1
Finishing/Landscaping	<1	2	3	<1	1	<1
Maximum Daily Emissions	20	20	24	<1	3	2
<b>Combined Scenario</b>						
All Construction Activities Overlap <sup>3</sup>	29	95	95	<1	17	8
Maximum Daily Emissions <sup>4</sup>	<b>86</b>	<b>286</b>	285	1	52	25
South Coast AQMD Regional Thresholds	75	100	550	150	150	55
Significant?	Yes	Yes	No	No	No	No

Source: CalEEMod Version 2016.3.2. Highest winter or summer emissions are reported.

<sup>1</sup> Construction equipment mix is based on information provided, anticipated, and CalEEMod default construction mix.<sup>2</sup> Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.<sup>3</sup> Assumes all construction activities associated with a development phase would overlap concurrently.<sup>4</sup> Based on the "All Construction Activities Overlap" emissions multiplied by three, which is the potential number of development phases that could occur concurrently under the Specific Plan.

As shown in the table, construction activities associated with implementation of the Specific Plan could potentially exceed the South Coast AQMD regional thresholds for VOC and NO<sub>x</sub> based on the maximum daily emissions generated under the combined scenario. The primary source of NO<sub>x</sub> emissions is vehicle and construction equipment exhaust. NO<sub>x</sub> is a precursor to the formation of both O<sub>3</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). The primary source of VOC during construction is from the application of paint and it is a precursor to the formation of O<sub>3</sub>. Project-related emissions of VOC and NO<sub>x</sub> would contribute to the O<sub>3</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> nonattainment designations of the SoCAB. Therefore, project-related construction activities would result in potentially significant regional air quality impacts.

**Impact 5.2-3: Long-term emissions associated with the Specific Plan would not generate emissions associated with vehicle trips in exceedance of South Coast AQMD's threshold criteria. [Thresholds AQ-2]**

**Impact Analysis:** Buildout of the Specific Plan would result in direct and indirect criteria air pollutant emissions from transportation, energy (e.g., natural gas use), and area sources (e.g., aerosols and landscaping equipment). Mobile-source criteria air pollutant emissions are based on vehicle trip generation data provided

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by Fehr & Peers (see Appendix I of this DEIR). As shown in Table 5.2-13, operation of the proposed residential land uses at buildout would not generate air pollutant emissions that exceed South Coast AQMD's regional significance thresholds. Therefore, the operation of the Specific Plan would not significantly contribute to the nonattainment designations of the SoCAB and operation-related regional air quality impacts would be less than significant.

**Table 5.2-13 Maximum Daily Regional Operational Phase Emissions**

Source	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Existing (Year 2033)<sup>1</sup></b>						
Area	16	1	71	<1	<1	<1
Energy <sup>2</sup>	<1	3	1	<1	<1	<1
Mobile <sup>3</sup>	6	11	75	<1	35	9
<b>Total</b>	<b>22</b>	<b>14</b>	<b>147</b>	<b>&lt;1</b>	<b>36</b>	<b>10</b>
<b>Specific Plan Full Buildout (Year 2033)</b>						
Area	45	1	114	<1	1	1
Energy <sup>4</sup>	1	5	2	<1	<1	<1
Mobile <sup>3</sup>	11	21	129	<1	58	16
<b>Total</b>	<b>57</b>	<b>27</b>	<b>245</b>	<b>&lt;1</b>	<b>60</b>	<b>17</b>
<b>Net Change (Project – Existing)<sup>1,5</sup></b>						
Net Change	35	13	98	<1	24	7
South Coast AQMD Regional Thresholds	55	55	550	150	150	55
<b>Significant?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: CalEEMod Version 2016.3.1. Based on highest winter or summer emissions. Totals may not equal 100 percent due to rounding.

<sup>1</sup> Existing emissions based on year 2033 vehicle emissions data is utilized as vehicle emissions associated with existing land uses would not occur in perpetuity, but would change overtime to comply with emissions standards and to account for vehicle turnover from older cars to newer cars as time passes. However, while the existing emissions are based on year 2033 data, the land use assumed is still based on the current existing land use.

<sup>2</sup> Utilizes the CalEEMod historical energy rates, which are based on the 2005 Building Energy Efficiency Standards.

<sup>3</sup> Based on calendar year 2033 emission rates obtained from EMFAC2017, Version 1.0.2., and adjusted based on CalEEMod methodology for vehicle emission rates.

<sup>4</sup> New buildings are assumed to comply with the 2019 Building Energy Efficiency Standards and are modeled to be one percent more energy efficient for natural gas compared to the 2016 Building Energy Efficiency Standards.

<sup>5</sup> Vehicle emission rates typically decrease over time due to compliance with emissions regulations. Thus, the existing uses under buildout year 2033 conditions result in lower emissions compared to baseline year 2020 conditions. However, comparison of existing uses under year 2033 conditions to the Specific Plan results in a more conservative result as the net change is greater.

### Overlap of Construction and Operational Phase

The South Coast AQMD does not have a significance threshold for construction/operation overlap; therefore, this analysis is included for informational purposes only. Table 5.2-14 shows the overlap of maximum construction and operation emissions based on full buildout of the Specific Plan. Based on the anticipated implementation schedule for the Specific Plan, there is potential for overlap between construction and operational activity. Combining the maximum daily construction emissions (see Table 5.2-12) with the maximum daily operational emissions (see Table 5.2-13) would give a maximum daily emission representing peak construction activity and full buildout of the project, a scenario that would not occur. Additionally, the peak daily construction emissions for the combined scenario are based on all construction activities for an individual development phase overlapping in addition to the overlap of three separate development phases. While it is anticipated that overlap between construction activities and development phases could occur, it is

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likely that only some construction activities for a given development phase and across other development phases would overlap at any one time and not all at once.

**Table 5.2-14 Potential Overlap of Construction and Operational Activities**

Scenario	Unmitigated Regional Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Construction Combined Scenario Maximum Daily Emissions	86	286	285	1	52	25
Operational Maximum Daily Emissions (Net)	35	13	98	<1	24	7
<b>Max Daily Combined Emissions</b>	<b>121</b>	<b>299</b>	<b>382</b>	<b>1</b>	<b>76</b>	<b>32</b>

Source: CalEEMod Version 2016.3.2.

**Impact 5.2-4: Operation of the proposed land uses accommodated under the Specific Plan would not expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-3]**

**Impact Analysis:** Operation of new land uses that would be accommodated under the Specific Plan could generate new sources of criteria air pollutants and TACs in the Specific Plan area from area/stationary sources and mobile sources. Unlike the mass of operation emissions shown in Table 5.2-13, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or  $\mu\text{g}/\text{m}^3$ ) and can be correlated to potential health effects.

### Operation Phase Localized Significance Thresholds (LSTs)

The screening-level LSTs are the amount of project-related stationary and area sources of emissions at which localized concentrations (ppm or  $\mu\text{g}/\text{m}^3$ ) would exceed the ambient air quality standards for criteria air pollutants for which the SoCAB is designated a nonattainment area. The Specific Plan would primarily permit the development of residential uses only and commercial and retail uses that are not associated with generating a high or substantial number of trucks. Typical sources of criteria air pollutant emissions within the Specific Plan from stationary and area sources include energy use (natural gas used for cooking and water heating) and landscaping fuel and aerosols. Types of land uses that typically generate substantial quantities of criteria air pollutants and TACs include industrial (stationary sources) and warehousing (truck idling) land uses. These types of major air pollutant emissions sources are not permitted in the Plan Area. Thus, the Specific Plan would not result in creation of land uses that would generate substantial concentrations of criteria air pollutant emissions. Therefore, localized operation-related air quality impacts are considered less than significant.

### Operational Phase CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for the attainment by South Coast AQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.<sup>10</sup> As identified in

<sup>10</sup> The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire

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South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide, peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection (South Coast AQMD 1992; South Coast AQMD 2003).

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). Under full buildout conditions, the Specific Plan would result in a net increase of 351 peak hour trips (PM). Thus, implementation of the Specific Plan would not produce the volume of traffic required (i.e., 24,000 to 44,000 peak hour vehicle trips) to generate a CO hotspot. Therefore, implementation of the Specific Plan would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the Plan Area, and impacts would be less than significant.

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**Impact 5.2-5: Construction-related emissions associated with land uses accommodated under the Specific Plan could expose sensitive receptors to substantial concentrations of criteria air pollutants and toxic air contaminants. [Threshold AQ-3]**

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**Impact Analysis:** Development of new land uses that would be accommodated under the Specific Plan could generate new sources of criteria air pollutants from construction equipment exhaust and fugitive dust (criteria air pollutants only). Implementation of the Specific Plan could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevating those levels. Unlike the mass of construction emissions shown in Table 5.2-12, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or  $\mu\text{g}/\text{m}^3$ ) and can be correlated to potential health effects.

#### Construction Phase Localized Significance Thresholds (LSTs)

The screening-level LSTs are the amount of project-related emissions at which localized concentrations (ppm or  $\mu\text{g}/\text{m}^3$ ) would exceed the AAQS for criteria air pollutants for which the SoCAB is designated a nonattainment area. As stated, they are based on the acreage disturbed and distance to the nearest sensitive receptor. Nearest off-site sensitive receptor to the Plan Area is the adjacent Cabrillo High School to the north and east. Beyond the high school campus are residences north of West Hill Street and east of Santa Fe Avenue. However, for purposes of this evaluation, the nearest sensitive receptors would be the onsite residents that could surround construction accommodated under the Specific Plan. It is anticipated that onsite residences could be within 82 feet of active construction areas within the Specific Plan.<sup>11</sup>

Table 5.2-15 shows the maximum daily construction emissions (pounds per day) generated during onsite construction activities. As shown in the table, maximum daily construction emissions would not exceed the South Coast AQMD screening-level LST for CO. However, construction activities would result in exceeding

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and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

<sup>11</sup> The distance of 82 feet is the minimum referenced distance per the South Coast AQMD LST methodology (South Coast AQMD 2008b)



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the screening-level LSTs for NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>. The PM<sub>10</sub> and PM<sub>2.5</sub> emissions shown in the table represent the total onsite particulate matter emissions generated from vehicle exhaust and fugitive dust. Onsite NO<sub>x</sub> emissions are from off-road equipment exhaust. Therefore, without mitigation, development of the Specific Plan would result in a potentially significant localized air quality impact and cause an exceedance of the California AAQS.

**Table 5.2-15 Maximum Daily Onsite Localized Construction Emissions**

Source	Pollutants (pounds per day) <sup>1, 2</sup>			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
All Construction Activities Overlap <sup>3</sup>	76	76	12	7
Maximum Daily Emissions <sup>4</sup>	227	229	35	21
3.36-Acre Screening-Level LSTs	101	1,154	10	6
Exceeds LSTs?	Yes	No	Yes	Yes

Source: CalEEMod 2016.3.2; South Coast AQMD 2008b; South Coast AQMD 2011. In accordance with South Coast AQMD methodology, only on-site stationary sources and mobile equipment occurring on the proposed project site are included. Screening-level LSTs are based on receptors within 82 feet (25 meters) of the project site.

<sup>1</sup> Construction equipment mix is based on information provided, anticipated, and CalEEMod default construction mix.

<sup>2</sup> Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

<sup>3</sup> Assumes all construction activities associated with a development phase would overlap concurrently.

<sup>4</sup> Based on the "All Construction Activities Overlap" emissions multiplied by three, which is the potential number of development phases that could occur concurrently under the Specific Plan.

### Construction Phase Toxic Air Contaminants (TACs)

Health risks associated with toxic air contaminant emissions from construction equipment are primarily due to DPM. The South Coast AQMD currently does not require health risk assessments to be conducted for short-term emissions from construction equipment. OEHHA adopted new guidance for the preparation of health risk assessments that was issued in March 2015 (OEHHA 2015). However, while OEHHA has developed a cancer risk factor and noncancer chronic reference exposure level for DPM, these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM.

The Specific Plan is a broad-based policy plan that would be implemented over a period of 10 years or more. This anticipated buildout period would limit the exposure of on- and off-site receptors to elevated concentrations when compared to the 30-year exposure time frame. Additionally, it is anticipated that construction of individual developments accommodated under the plans would likely be spread out incrementally over this period of time, which would also limit the exposure of on- and off-site receptors to elevated concentrations of DPM. However, based on guidance from South Coast AQMD, construction risk is extrapolated based on the LST analysis (South Coast AQMD 2013-2020). As shown above in Table 5.2-15, construction activities would exceed the screening-level construction LSTs. Thus, construction of the development that would be accommodated by the Specific Plan has the potential to expose sensitive receptors to substantial pollutant concentrations of TACs. Therefore, construction activities associated with

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implementation of the Specific Plan could result in localized air quality impacts that are potentially significant as it pertains to TACs.

#### 5.2.4 Cumulative Impacts

In accordance with South Coast AQMD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects in the local area include new development and general growth in the Plan Area. The greatest source of emissions in the SoCAB is mobile sources. Due to the extent of the area potentially impacted from cumulative project emissions (i.e., the SoCAB), South Coast AQMD considers a project cumulatively significant when project-related emissions exceed the South Coast AQMD regional emissions thresholds shown in Table 5.2-6. No significant cumulative impacts were identified with regard to CO hotspots.

##### Construction

The SoCAB is designated nonattainment for O<sub>3</sub> and PM<sub>2.5</sub> under the California and National AAQS and nonattainment for PM<sub>10</sub> and lead (Los Angeles County only) under the National AAQS. Construction of cumulative projects would further degrade the regional and local air quality. Air quality would be temporarily impacted during construction activities. Implementation of mitigation measures for related projects would reduce cumulative impacts. However, project-related construction emissions could still potentially exceed the South Coast AQMD significance thresholds on a project and cumulative basis for VOC and NO<sub>x</sub>. Consequently, because VOC and NO<sub>x</sub> contribute to the formation of ozone and particulate matter, the Specific Plan's contribution to cumulative air quality impacts for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would be cumulatively considerable and therefore would be significant.

##### Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by South Coast AQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. As discussed in the above impact analysis, operation of the Specific Plan would not result in emissions in excess of the South Coast AQMD regional emissions thresholds. Therefore, the air pollutant emissions associated with the Specific Plan would not be cumulatively considerable and impacts are less than significant.

#### 5.2.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.2-1, 5.2-3 and 5.2-4.

Without mitigation, these impacts would be **potentially significant**:

- Impact 5.2-2 and Cumulative      Construction activities associated with the Specific Plan could generate short-term emissions that would exceed South Coast AQMD's regional significance thresholds and cumulatively

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contribute to the nonattainment designations of the South Coast Air Basin (SoCAB).

#### ■ Impact 5.2-5

Construction-related emissions associated with land uses accommodated under the Specific Plan could expose sensitive receptors to substantial concentrations of criteria air pollutants and toxic air contaminants.

### 5.2.6 Mitigation Measures

#### Impact 5.2-2

AQ-1 The construction contractor(s) shall incorporate the following measures into the proposed Project to reduce construction criteria air pollutant emissions, including VOC, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, generated by construction equipment used for future development projects implemented under the proposed Century Villages at Cabrillo Specific Plan:

- All off-road equipment with engines rated at 50 horsepower or greater, shall at minimum, meet the United States Environmental Protection Agency's Tier 4 Interim emissions limits. An exemption from these requirements may be granted by the City of Long Beach (City) in the event that the applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment. Before an exemption may be considered by the City, the applicant shall be required to, at minimum, demonstrate that two construction fleet owners/operators in the Los Angeles Region were contacted and that those owners/operators confirmed Tier 4 Interim or better equipment could not be located within the Los Angeles region. To ensure that Tier 4 Interim construction equipment or better would be used during the Proposed Project's construction, the City shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractor(s) must demonstrate the ability to supply the compliant construction equipment for use and provide to the City a list of all construction equipment proposed to be used that states the makes, models, Equipment Identification Numbers, and number of construction equipment onsite prior to any ground disturbing and construction activities.
- Minimize simultaneous operation of multiple construction equipment units. During construction, vehicles in loading and unloading queues shall not idle for more than 5 minutes, and shall turn their engines off when not in use to reduce vehicle emissions.
- Properly tune and maintain all construction equipment in accordance with manufacturer's specifications;

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- Where feasible, employ the use of electrical or alternative fueled (i.e., nondiesel) construction equipment, including forklifts, concrete/industrial saws, pumps, aerial lifts, air compressors, and other comparable equipment types to the extent commercially available.
- To reduce the need for electric generators and other fuel-powered equipment, provide on-site electrical hookups for the use of hand tools such as saws, drills, and compressors used for building construction.
- Develop a Construction Traffic Control Plan to ensure construction traffic and equipment use is minimized to the extent practicable. The Construction Traffic Control Plan shall include measures to reduce the number of large pieces of equipment operating simultaneously during peak construction periods, scheduling of vendor and haul truck trips to occur during non-peak hours, establish dedicated construction parking areas to encourage carpooling and efficiently accommodate construction vehicles, identify alternative routes to reduce traffic congestion during peak activities, and increase construction employee carpooling.
- Encourage construction contractors to apply for South Coast Air Quality Management District “SOON” funds. The “SOON” program provides funds to applicable fleets for the purchase of commercially-available low-emission heavy-duty engines to achieve near-term reduction of NO<sub>x</sub> emissions from in-use off-road diesel vehicles.

AQ-2

The construction contractor(s) shall incorporate the following measures into the proposed Project to reduce construction fugitive dust emissions (PM<sub>10</sub> and PM<sub>2.5</sub>), generated by grading and construction activities of future development projects implemented under the proposed Century Villages at Cabrillo Specific Plan, consistent with South Coast Air Quality Management District (South Coast AQMD) Rule 403, with a goal of retaining dust on the site:

- Water, or utilize another South Coast AQMD-approved dust control non-toxic agent, on the grading areas at least three times daily to minimize fugitive dust.
- All permanent roadway improvements shall be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on unpaved roads. To reduce fugitive dust from earth-moving operations, building pads shall be finalized as soon as possible following site preparation and grading activities.
- Stabilize grading areas as quickly as possible to minimize fugitive dust.
- Apply chemical stabilizer, install a gravel pad, or pave the last 100 feet of internal travel path within the construction site prior to public road entry, and to on-site stockpiles of excavated material.

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- Remove any visible track-out into traveled public streets with the use of sweepers, water trucks, or similar method as soon as possible.
- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads. Unpaved construction site egress points shall be graveled to prevent track-out.
- Wet wash the construction access point at the end of the workday if any vehicle travel on unpaved surfaces has occurred.
- Cover haul trucks or maintain at least 2 feet of freeboard to reduce blow-off during hauling.
- Evaluate the need for reduction in dust generating activity, potential to stop work, and/or implementation of additional dust control measures if winds exceed 25 miles per hour.
- Enforce a 15-mile-per-hour speed limit on unpaved surfaces.
- Provide haul truck staging areas for the loading and unloading of soil and materials. Staging areas shall be located away from sensitive receptors, at the furthest feasible distance.
- Construction Traffic Control Plans shall route delivery and haul trucks required during construction away from sensitive receptor locations and congested intersections, to the extent feasible. Construction Traffic Control plans shall be finalized and approved prior to issuance of grading permits.
- Review and comply with any additional requirements of South Coast AQMD Rule 403.

AQ-3 To address the impact relative to volatile organic compound (VOC) emissions, the construction contractor(s) shall use Super-Compliant VOC-content architectural coatings (0 grams per liter to less than 10 grams per liter VOC) during Proposed Project construction/application of paints and other architectural coatings to reduce ozone precursors. If paints and coatings with VOC content of 0 grams/liter to less than 10 grams/liter cannot be utilized, the developer shall avoid application of architectural coatings during the peak smog season: July, August, and September. The developer shall procure architectural coatings from a supplier in compliance with the requirements of South Coast Air Quality Management District's Rule 1113 (Architectural Coatings).

### Impact 5.2-5

Mitigation Measures AQ-1 and AQ-2 would also minimize localized criteria air pollutant and TAC emissions from site-specific construction activities within the Specific Plan.

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#### 5.2.7 Level of Significance After Mitigation

##### Impact 5.2-2

Buildout of the Specific Plan would occur over approximately 10 years or longer. Construction activities associated with buildout of the Specific Plan could generate short-term emissions that exceed the South Coast AQMD's significance thresholds during this time and cumulatively contribute to the nonattainment designations of the SoCAB. Implementation of Mitigation Measures AQ-1 through AQ-3 would reduce criteria air pollutant emissions of VOC and NO<sub>x</sub> from construction-related activities to the extent feasible. However, construction time frames and equipment for individual site-specific projects are not available and there is a potential for multiple developments to be constructed at any one time, resulting in significant construction-related emissions. Therefore, despite adherence to Mitigation Measures AQ-1 through AQ-3, Impact 5.2-2 would remain ***significant and unavoidable***.

As stated, the attainment designation is based on compliance with the National and California AAQS, which are set at levels that are generally determined to provide an adequate level of safety in protecting the public health pursuant to the Clean Air Act and are applied at the regional level. Because the Specific Plan would exceed the VOC and NO<sub>x</sub> regional thresholds, it would result in a ***significant and unavoidable*** regional air quality impact and would cumulatively contribute to the nonattainment designations of the SoCAB.

The general health impacts associated with each of the emissions analyzed in this section are provided above in pages 5.2-1 through 5.2-5. However, per South Coast AQMD, exceedance of the regional significance thresholds cannot be used to correlate a project to quantifiable health impacts, unless emissions are sufficiently high to use a regional model (see Appendix C2). Because the AAQS is applied at the regional level, a regional scale air quality model is necessary to determine the concentrations of the criteria air pollutants in the SoCAB and whether they exceed the AAQS. In general, regional scale air quality modeling efforts are conducted by air districts as they are the agencies that oversee compliance of the air basins to the AAQS. Regional air quality models currently available to air districts typically attempt to account for all emissions sources within an air basin. Due to the nature of the available regional model, the purpose of the AAQS, the AAQS being based on concentrations instead of mass emissions, and the complexity in correlating concentration levels with the amount of mass emissions generated, a large change in emissions would be needed to provide observable and meaningful results. For example, as part of its preparation of the 2012 AQMP, South Coast AQMD showed that reducing NO<sub>x</sub> by 431 tons per day (157,680 tons per year) and VOC by 187 tons per day (68,255 tons per year) would reduce ozone concentration levels by only 9 parts per billion (see Appendix C2). The maximum daily emission of 120 pounds per day of NO<sub>x</sub> (0.06 tons per day or 22 tons per year) generated from project-related operational activities would exceed the regional significance threshold by 65 pounds per day. Thus, in the regional model, the changes in regional emissions generated by the Specific Plan are too small of a resolution (size of the project site and emissions quantity) for the project to substantially affect the concentrations predicted in the South Coast AQMD's regional model. Therefore, while emissions are conservatively assumed to cumulatively contribute to the nonattainment designation because they exceed the South Coast AQMD's regional significance threshold, it would be speculative to determine the health consequences from the incremental increase in emissions because the Specific Plan is unlikely to be large enough (i.e., smaller than the

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smallest resolution of the regional model) to substantially affect the concentrations predicted in South Coast AQMD's regional model.

#### Impact 5.2-5

Mitigation Measures AQ-1 and AQ-2 (applied for Impact 5.2-2), which would require implementation of project-specific measures would contribute in reducing the Specific Plan's regional construction emissions and therefore, also result in a reduction of localized construction-related criteria air pollutant and TACs emissions to the extent feasible. However, because existing sensitive receptors may be close to project-related construction activities, construction emissions generated by individual development projects have the potential to exceed South Coast AQMD's project-specific LSTs and health risk thresholds. Furthermore, because of the scale of development activity associated with buildout of the Specific Plan, it is not possible to determine whether the scale and phasing of individual development projects would result in the exceedance of the localized emissions thresholds and contribute to known health effects. Therefore, Impact 5.2-5, regarding construction-related localized impacts from criteria air pollutant and TAC emissions associated with buildout of the Specific Plan, would remain *significant and unavoidable*.

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### 5.3 CULTURAL RESOURCES

Cultural resources comprise archaeological and historical resources. A cultural resource is defined as any object or specific location of past human activity, occupation, or use, identifiable through historical documentation, inventory, or oral evidence. Cultural resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. Cultural resources can be separated into three categories: archaeological, built environment, and traditional cultural resources.

Archaeology studies human artifacts, such as places, objects, and settlements that reflect group or individual religious, cultural, or everyday activities. Archaeological resources include both historic and prehistoric remains of human activity. Historic-period resources include historic structures, structural ruins (such as foundation remnants), sites (such as artifact reuse deposits and artifact-filled features), objects, or places that are at least 50 years old and are significant for their engineering, architecture, cultural use or association. In California, historic resources cover human activities over the past 12,000 years. Prehistoric resources can include lithic artifact or ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and monuments, canals, historic roads and trails, bridges, and ditches and objects.

A traditional cultural resource or property can include Native American sacred sites (such as rock art sites and cemeteries) and traditional resources, such as gathering locations, which are important for maintaining the cultural traditions of any group. These resources are described and evaluated in Section 5.15, *Tribal Cultural Resources*.

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Villages at Cabrillo Specific Plan (Specific Plan) to impact cultural resources in the City of Long Beach—specifically, in the area covered by the Specific Plan (Plan Area) and its surroundings. Impacts to paleontological resources are addressed in Section 5.5, *Geology and Soils*.

The analysis in this section is based in part on the following technical report:

- *Cultural and Paleontological Resources Assessment Report*, Cogstone, November 2020

A complete copy of this this technical report is provided in Appendix D of this DEIR.

#### 5.3.1 Environmental Setting

##### 5.3.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to cultural resources that are applicable to the Specific Plan are summarized below.

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### CULTURAL RESOURCES

#### Federal

##### *National Historic Preservation Act*

The National Historic Preservation Act of 1966 (NHPA) coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

##### *National Register of Historic Places*

The National Register of Historic Places (NRHP) is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The NRHP recognizes resources of local, state, and national significance which have been documented and evaluated according to uniform standards and criteria.

Authorized under the NHPA, the NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The NHRP is administered by the National Park Service, which is part of the U.S. Department of the Interior.

To be eligible for listing in the NRHP, a resource must meet at least one of the following criteria:

- A. Is associated with events that have made a significant contribution to the broad patterns of our history
- B. Is associated with the lives of persons significant in our past
- C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction
- D. Has yielded, or may be likely to yield, information important in history or prehistory

##### *Archaeological Resources Protection Act*

The Archaeological Resources Protection Act of 1979 (United States Code, Title 16, Sections 470aa et seq.) regulates the protection of archaeological resources and sites on federal and Indian lands.

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### *Native American Graves Protection and Repatriation Act*

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

### **State**

#### *California Public Resources Code*

Archaeological and historical sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, cultural resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA.

PRC Sections 5020 to 5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

PRC Sections 5079 to 5079.65 define the functions and duties of the Office of Historic Preservation (OHP), which administers federal- and state-mandated historic preservation programs in California as well as the California Heritage Fund.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission (NAHC); require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

#### *California Register of Historical Resources*

The California Register of Historical Resources (CRHR) is a listing of all properties considered to be significant historical resources in the state. The CRHR includes all properties listed or determined eligible for listing on the NRHP, including properties evaluated under Section 106, and State Historical Landmarks number No. 770 and above. The CRHR statute specifically provides that historical resources listed, determined eligible for listing on the CRHR by the State Historical Resources Commission (Commission), or resources that meet the CRHR criteria are resources which must be given consideration under CEQA (see above). Other resources, such as resources listed on local registers of historic registers or in local surveys, may be listed if they are determined by the Commission to be significant in accordance with criteria and procedures to be adopted by the Commission and are nominated; their listing in the CRHR, is not automatic.

Resources eligible for listing include buildings, sites, structures, objects, or historic districts that retain historical integrity and are historically significant at the local, state, or national level under one or more of the following four criteria:

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### CULTURAL RESOURCES

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance.

Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

### Local

#### *City of Long Beach Historic Landmarks*

Section 2.63.050 (Criteria for Designation of Landmarks and Landmark Districts) of the Long Beach Municipal Code, as amended by Ordinance No. ORD-15-0038, establishes the procedures and criteria for designating local historic landmarks. Specifically, a cultural resource qualifies for designation as a landmark if it retains integrity and manifests one or more of the following criteria:

- A. It is associated with events that have made a significant contribution to the broad patterns of our history.
- B. It is associated with the lives of persons significant in the City's past.
- C. It embodies the distinctive characteristics of a type, period or method of construction, or it represents the work of a master or it possess high artistic values.
- D. It has yielded, or may be likely to yield, information important in prehistory or history.

The City of Long Beach also recognizes local historic districts. Per Section 2.63.050, a group of cultural resources qualify for designation as a landmark district if it retains integrity as a whole and meets the following criteria:

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- A. The grouping represents a significant and distinguishable entity that is significant within a historic context; and
- B. A minimum of 60 percent of the properties within the boundaries of the proposed landmark district qualify as a contributing property.

### 5.3.1.2 EXISTING CONDITIONS

As shown in Figure 3-3, *Aerial Photograph*, the Plan Area is fully developed and in a highly urbanized area of the City of Long Beach (City), on the western edge of the City (see Figure 3-1, *Regional Location*). The Plan Area encompasses 27-acres within a portion of a former United States Naval housing facility located at 2001 River Avenue. It has been developed and redeveloped over the past seventy years and the former Naval housing and facilities were either rehabilitated or removed for new construction. Existing land uses are comprised of a combination of one and two-story rehabilitated Naval housing and new one, two, three, four and five-story residential buildings some of which are built over enclosed garages that are lined with ground floor functions including service providers and community spaces. Refer to Section 4.3.1.2, *Existing Land Uses*, of Chapter 4, *Environmental Setting*, for a detailed description of existing land uses in the Plan Area.

As shown in Figure 3-3, the Plan Area is bordered by Cabrillo High School and associated campus facilities to the north and east; California State Long Beach Job Corps Center to the east; California State Long Beach Technology and, warehousing, distribution and logistics uses to the south; and warehouse, distribution and logistics uses to the west, across State Route 103 (SR-103). Culturally, the Plan Area lies within Township 3 South, Range 13 West, Sections 26 and 27 of the San Bernardino Base and Meridian and on the United States Geological Survey (USGS) 7.5-minute Long Beach topographic map.

### Geologic Setting

The Plan Area lies within the Los Angeles Basin; a sedimentary basin that includes the coastal plains of Los Angeles and Orange counties and out to Catalina Island. This region is bounded by the Santa Ana Mountains to the east, Santa Monica Mountains to the north, and San Joaquin Hills to the south. The marine Los Angeles Basin began to develop in the early Miocene, about 23 million years ago. Through time the basin transitioned to terrestrial deposition by the middle Pleistocene, about 1 million years ago.

The region is part of the coastal section of the northernmost Peninsular Range Geomorphic Province and is characterized by elongated northwest-trending mountain ridges separated by sediment-floored valleys. Subparallel faults branching off from the San Andreas Fault to the east create the local mountains and hills. The Peninsular Range Geomorphic Province is in the southwestern corner of California and is bounded by the Transverse Range Geomorphic Province to the north and the Colorado Desert Geomorphic Province to the east.

The Plan Area is mapped entirely as late Pleistocene to Holocene young alluvium (unit 2) which was deposited between 126,000 years ago and through into historic times. These flood plain deposits consist of poorly sorted, permeable clays to sands. Deposits are poorly consolidated and may be capped by poorly to moderately

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developed soils. These sediments were deposited by streams and rivers on canyon floors and in the flat flood plains of the area.

#### Natural Setting

Historically, as shown in the 1901 USGS Southern California Sheet No. 1 topographic map, the Los Angeles River flowed over the Plan Area and Bixby Slough was approximately 3.4 miles to the west. Currently, the Plan Area is 0.3 mile east of the Dominguez Channel, 1.0 miles west of the Los Angeles River, and 2.5 miles north of Long Beach Harbor. Bixby Slough has been incorporated into Harbor Lakes at Harbor Park.

Prior to development, the native vegetation of the Plan Area consisted of the riparian species of the Los Angeles River and California coastal sage scrub. Plants of the riparian zone is characterized by more trees than the more arid coastal sage scrub. These include willows, Fremont's cottonwood, Western sycamore, white alder, big-leaf maple, coast live oak, and California bay laurel. Ground cover includes sedges, rushes, bunchgrasses, berries, and monkeyflowers. Large native land mammals of the region included mule deer, bighorn sheep, tule elk, pronghorn, bison, bobcat, mountain lion, jaguar, coyote, grey wolf, black and grizzly bears. Smaller native fauna included rabbits, desert tortoise, and numerous other species.

#### Cultural Setting

##### *Regional Prehistory*

The cultural chronology for the Plan Area includes the Topanga pattern of the Encinitas Tradition followed by the Angeles pattern of the Dey Rey Tradition. The Topanga Pattern were generally small and highly mobile with temporary villages along the coast in wetlands, bays, coastal plains, near-coastal valleys, marine terraces, and mountains. Tools used by the Topanga pattern are typically dominated by mano and metates with projectile points scarce. The Angeles pattern were generally restricted to the mainland with largely terrestrial focus and greater emphases on hunting and nearshore fishing. The Angeles pattern were also characterized by changes in settlement pattern to fewer but larger permanent villages, development of mainland dialect of Gabrielino, and use of domesticated animals. The Angeles pattern of the Dey Rey Tradition represented the arrival, divergence, and development of the Gabrielino in southern California.

##### *Ethnohistory*

Early Native American peoples of the Plan Area are poorly understood. They were replaced about 1,000 years ago by the Gabrielino (Tongva) who were semi-sedentary hunters and gatherers. The Gabrielino speak a language that is part of the Takic language family. Their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the Southern Channel Islands, in all an area of more than 2,500 square miles. At European contact, the tribe consisted of more than 5,000 people living in various settlements throughout the area. Some of the villages could be quite large, housing up to 150 people.

The Gabrielino are considered to have been one of the wealthiest tribes and to have greatly influenced tribes they traded with. Houses were domed, circular structures thatched with tule or similar materials. The best



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known artifacts were made of steatite and were highly prized. Many common everyday items were decorated with inlaid shell or carvings reflecting an elaborately developed artisanship.

The main food zones utilized were marine, woodland, and grassland. Plant foods were, by far, the greatest part of the traditional diet at contact. Acorns were the most important single food source. Villages were located near water sources necessary for the leaching of acorns, which was a daily occurrence. Grass seeds were the next most abundant plant food used along with chia. Various teas were made from flowers, fruits, stems, and roots for medicinal cures as well as beverages.

The principal game animals were deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, quail, dove, ducks, and other birds. Trout and other fish were caught in the streams, while salmon were available when they ran in the larger creeks. Sea mammals, fish, and crustaceans were hunted and gathered from both the shoreline and the open ocean, using reed and dugout canoes. Shellfish were the most common resource, including abalone, turban, mussels, clams, scallops, bubble shells, and others.

The nearest Gabrielino community to the Plan Area is the Povuu'nga community, located along the San Gabriel River within the coastal region. It is one of three important Gabrielino communities within the region and was founded by refugees from the San Gabriel area. Povuu'nga most likely served as a ritual center for the Gabrielino communities of the area based on the description given by Father Geronimo Boscan. Povuu'nga was described as the birthplace of both Wewyoot (the first tomyaar), and the creator-god and spiritual being Chengüchngech. Povuu'nga is likely located on a hilltop site occupied by historic Rancho Los Alamitos in the City of Long Beach. The community existed until at least 1805 based on baptismal records from the San Gabriel and San Juan Capistrano missions. The Plan Area was not home to any known major villages. However, it is likely smaller villages and seasonal camps were present in the vicinity of the Plan Area.

### *Early California History*

Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino. Between 1769 and 1822 the Spanish had colonized California and established missions, presidios, and pueblos. In 1821 Mexico won its independence from Spain and worked to lessen the wealth and power held by the missions. The Secularization Act was passed in 1833, giving the vast mission lands to the Mexican governor and downgrading the missions' status to that of parish churches. The governor then redistributed the former mission lands to private owners in the form of grants. Ranchos in California numbered over 500 by 1846, all but approximately 30 of which resulted from land grants. Following the signing of the Treaty of Guadalupe Hidalgo on February 2, 1848, which ceased American/Mexican hostilities, the region transitioned to the American Period of California. In 1850, California was granted statehood and although the United States promised to honor the land grants, the process of defining rancho boundaries and proving legal ownership became time consuming and expensive. Legal debts led to bankruptcies followed by the rise in prices of beef, hide, and tallow. This combined with flooding and drought was detrimental to the cattle industry. Ranchos were divided up and sold inexpensively.

The Plan Area lies within the boundaries of the former Rancho Los Cerritos. Rancho Los Cerritos was originally part of the Rancho Los Nietos granted to retired Spanish Soldier Manuel Nieto by the Spanish

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Empire's King Carlos III in 1784. This land grant was one of the first and largest Spanish land concessions which included all the land between the San Gabriel and Santa Ana rivers, from the foothills to the sea. After Nieto's death in 1804 the large rancho was divided into five ranchos: Santa Gertrudes, Los Coyotes, Los Cerritos, Los Alamitos, and Las Bolsas ranchos. In 1843, New England native Jonathan Temple purchased Rancho Los Cerritos.

#### *City of Long Beach History*

In 1866, Jonathan Temple sold Rancho Los Cerritos to Flint, Bixby & Co. who used the land to raise sheep. The company would appoint Jotham Bixby to manage business at Rancho Los Cerritos until the land was sold to William E. Willmore in 1880. Willmore subdivided the land and named it Willmore City by 1882. In 1887, a Los Angeles based land syndicate known as the "Long Beach Land and Water Company" bought out Willmore, and the community was renamed as "Long Beach" per the suggestion of the wife of the town's first postmaster, Belle Lowe. The City was officially incorporated in 1897.

By 1889, the Southern Pacific Railroad connected Long Beach with the San Pedro Line. The Long Beach School District, a local newspaper called the *Long Beach Journal*, the Long Beach Hotel, along with the Methodist Resort Association's Chautauqua Assembly and Tabernacle at American Street and Third Avenue were established during the years following incorporation. In addition, general stores, brick-making facilities, an electric-lighting plant, a water company, and telephone services were quickly constructed in order to support the City's growing population.

In the 1920s, six of America's largest oilfields were discovered in Huntington Beach, Torrance, Inglewood, Seal Beach, and Signal Hill in Long Beach. The increase in drilling and demand for labor resulted in a wave of population growth and a subsequent housing crisis. In 1926, the Port of Long Beach was established and by 1938 the U.S. Navy began development on the largely manmade Terminal Island.

From the 1930s through World War II, more U.S. Navy personnel lived in Long Beach than in any other city in the United States. Following the bombing of Pearl Harbor and the subsequent entrance of the United States into World War II, numerous military bases, aircraft assembly plants, and other war-related facilities and industries were established in southern California. Major installations were located in Los Alamitos, Seal Beach, Westminster, and Long Beach. A workforce of 16,000 supported the Long Beach Naval Shipyard throughout World War II, making the Naval Shipyard the largest employer in Long Beach during the war.

Housing in the City could not support the Naval Shipyard's massive workforce and as a result, over 560 U.S. Navy families resided outside of the City limits. The growing need for military housing pushed Navy Officials to construct affordable housing within City limits. In 1938, the County of Los Angeles Housing Authority approved plans to construct 2,000 housing units at the cost of \$7 million. After constant negotiations between the City and U.S. Navy officials, the City agreed to approve the Navy's affordable housing project with the Savannah Family Housing developed in 1940 and the Cabrillo Housing Project (constructed on a parcel immediately south of Savannah) soon afterwards. The low-cost housing projects utilized the most modern, cost-saving designs and modern construction technology in order to meet the project's financial limitations. Materials utilized in the construction of these units included brick, plywood, concrete blocks, and steel sash

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### CULTURAL RESOURCES

windows. Such low-cost construction would continue in Long Beach's postwar defense and affordable housing projects.

After the end of World War II, California experienced unprecedented growth, the county of Los Angeles' population having already grown by 700,000 new residences since 1940. The severe housing shortage in southern California resulted in returning veterans sleeping on the streets. A postwar residential boom quickly followed in conjunction with the Serviceman's Readjustment Act (the G.I. Bill) signed in 1944 by President Franklin D. Roosevelt. The Naval Shipyard remained one of the city's greatest employers until its closure in the 1990s.

#### *Plan Area History*

The earliest available topographic map for the Plan Area is the 1896 USGS Downey topographic map. No development is shown in the Area, but roads, trains, building structures, and a bridge are present in the vicinity. The Area remained undeveloped until the property was first leased to the Long Beach Naval Shipyard by the federal government in 1935. A 1944 historic aerial shows the area was fully developed with various structures and buildings organized in a uniform pattern.

There were three sections to Cabrillo Housing: Cabrillo One, Cabrillo Two, and Cabrillo Three. Cabrillo One and Two were reserved for white families while Cabrillo Three housed African Americans. The location of these sections were not entirely within the Plan Area boundaries of present-day Cabrillo Housing and were described in the 2009 Long Beach Historic Context document as being "located in an area bounded by Reeve Street on the north, the Los Angeles river channel on the east, Fourteenth Street on the south, and Santa Fe Avenue on the west." It is not known at this time which of these three sections the current Plan Area intersects.

By 1960, the Navy had 1,983 housing units within Long Beach, including the Plan Area, that were deemed substandard and nearly all of them were scheduled for demolition in 1965 per the Landham Act; Congress then approved the construction of 1,500 new replacement units. Confirmed by historic aerials, the majority of historic-aged buildings within the Plan Area are multifamily units and carports constructed sometime between 1965 and 1968.

In 1991, the City of Long Beach was notified by the Department of Defense that Cabrillo Housing along with other facilities were to be closed. In 1997, under the McKinney Act, the U.S. Department of Defense conveyed the 27-acre Plan Area to the Century Housing Corporation for the benefit of the homeless. All historic-aged buildings were affected by some degree of modern renovations. The rehabilitated naval housing building at the Century Villages at Cabrillo currently provides transitional housing and support services to homeless veterans and the City's homeless population. At present, 42 buildings within the boundaries of Plan Area are considered historic in age.

#### **Cultural Resources**

Cogstone prepared a cultural resources assessment report for the Plan Area (Appendix D) in order to identify historical and archeological resources and analyze any potentially significant adverse effects to these resources as a result of implementation of the Specific Plan. Preparation of the report required records searches, site

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inspections, intensive-level surveys, background research, and Native American coordination. Following is a discussion of the cultural resource findings of the assessment report.

#### *Records Search Results*

Cogstone conducted a resources records search of the California Historic Resources Information System (CHRIS) at the South Central Coastal Information Center (SCCIC) in October 2019. The purpose of the records search was to determine the extent of previous cultural resources investigations and the presence of previously-recorded archaeological sites or historic-period (i.e., more than 50 years in age) resources in the Plan Area and within a one-mile (1600-meter) radius of the Plan Area.

The results of the CHRIS records search were received by Cogstone on October 23, 2019. The records search indicated that seven cultural resources investigations were conducted within a one-mile radius of the Plan Area between 1975 and 2014; no cultural resources investigations were conducted for the Plan Area. Details of all investigations are presented in Table 5.3-1.

**Table 5.3-1 Previous Cultural Studies within a One-Mile Radius of the Specific Plan Area**

Report No. (LA)	Author(s)	Title	Year
83	Rosen, Martin D.	Evaluation of the Archaeological Resources and Potential Impact of the Joint Outfall System's Improvements on Sewer Treatment Plants and Installation Routes for New Large Diameter Sewers, Los Angeles County	1975
358	Stickel, Gary E.	An Archaeological and Paleontological Resource Survey of the Los Angeles River, Rio Hondo River and the Whittier Narrows Flood Control Basin, Los Angeles, California	1976
3102	McCawley, William, John Romani, and Dana Slawson	The Los Angeles County Drainage Area Subsequent Environmental Impact Report	1994
2862	Susan M. Hector, Ph.D., William Manley, William R. Manley, and Carson Anderson	Historic and Archaeological Inventory and Eligibility Survey for Savannah and Cabrillo Family Housing, Naval Station Long Beach, California	1993
8474	Maki, Mary	Negative Phase I Archaeological Survey of Approximately 0.48 acres for the Bethune Transition Center Construction Project, 2101 San Gabriel Avenue, City of Long Beach, Los Angeles County, California	2003
10858	Anonymous	Supplemental Historic Property Survey Report Archaeological Survey Report: Commodore Schuyler Heim Bridge (Br. No. 53-2618) and SR-47 in the Ports of Long Beach and Los Angeles, Los Angeles County, California	2007
12808	Chasteen, Carrie, M.S., Tiffany Clark, Ph.D., RPA, Richard Hanes, Ph.D., and Michael Mirro, M.A. RPA.	Cultural Resources Study of the Wilmington Oil and Gas Field, Los Angeles County, California	2014

Source: Cogstone 2020.

The CHRIS records search also indicated that there are 18 recorded cultural resources within the one-mile

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search radius of the Plan Area, all of which are historic built environment resources as shown in Table 5.3-2. As shown in the table, 3 of the 18 recorded resources occur in the Plan Area, and one is located adjacent to the Plan Area. Prior to the built environment survey conducted for the Plan Area in December 2019 (see below), six previously recorded buildings within the Plan Area and one within 0.25 miles of the Plan Area were demolished and are not discussed further.

The other three historic-aged buildings in the Plan Area, are listed below, and still exist and are in use in the Plan Area.,

- P-19-187691: Building 39 (Child Lane),
- P- 19-187684: Buildings 46(1) and 46(2) (Building 5004), and
- P-19-187683: Building 47 (Building 5002)

**Table 5.3-2 Previously Recorded Cultural Resources in the Plan Area and Within a One-Mile Radius of the Plan Area**

Primary (P-19)	Resource Type	Resource Description	Year Recorded	Distance from the Plan Area
180783	Historic Built Environment	Railroad depot, Vernacular Style, "Pacific Electric R R Watson Station"; c. 1905.	1994	0.5-1
186868	Historic Built Environment	Tank Farm Storage for oil products, "KMEP Carson Terminal"; unknown.	2003	0.5-1
187085	Historic Built Environment	Highway/trail, "The Mojave Rd"; 2000 BCE.	1989, 2014	0.5-1
187181	Historic Built Environment	Single family property, Bungalow; 1947.	1999	0.5-1
187683	Historic Built Environment	1-3 story commercial building, "Tenant Activities, Bldg. #5002"; 1943.	1993	Within the Plan Area
187684	Historic Built Environment	1-3 story commercial building, "Public Works Shop, Bldg. #5004"; 1943.	1993	Within the Plan Area
187691	Historic Built Environment	Educational building, "Child Care Center, Bldg. #204"; c. 1960s.	1993	Within the Plan Area
188402	Historic Built Environment	Bridge, "Willow St. under Union Pacific RR Bridge #53C0590"; 1932.	2007	0.5-1
188864	Historic Built Environment	Public utility building-sanitary sewer pumping plant, "Motor/Pump Bldg., Long Beach Main Pumping Plant"; 1947.	2010	0.5-1
188865	Historic Built Environment	1-3 story commercial building, Vernacular Style, "Storage Yard"; 1956.	2010	0.5-1
188866	Historic Built Environment	1-3 story commercial building, "Machine Shop, M&S Machinery"; 1956.	2010	0.5-1
188867	Historic Built Environment	1-3 story building, "Commercial Suites, Magna Mechanical Specialties"; 1956.	2010	0.5-1
189988	Historic Built Environment	Electrical transmission tower, "Hinson-Pico-Tidelands 66kV M2-T4 Transmission Tower"; 1927.	2011	0.25-0.50
190277	Historic Built Environment	Engineering structure, "SCE Tower #M2-T2"; 1927.	2013	0-0.25
190588	Historic Built Environment	Industrial buildings, "Port of Long Beach Smokehouses"; 1929, 1952.	2012	0.5-1
192233	Historic Built Environment	1-3 story commercial building, Modern style, "Tambuli Super Market"; 1951.	2014	0.5 -1

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**Table 5.3-2 Previously Recorded Cultural Resources in the Plan Area and Within a One-Mile Radius of the Plan Area**

Primary (P-19)	Resource Type	Resource Description	Year Recorded	Distance from the Plan Area
192309	Historic Built Environment	Engineering structure-transmission line, "SCE's Long Beach-Laguna Bell 60kV and 220 kV Transmission Lines"; 1927-1928.	2016	0-0.25

Source: Cogstone 2020.

#### *Other Sources Search Results*

In addition to the SCCIC records search, a variety of sources were consulted to obtain information regarding the cultural context of the Plan Area. Sources included listings of resources on the NRHP, CRHR, California Historical Resources Inventory (CHRI), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). The Plan Area was not listed in any of these sources.

#### *Sacred Lands File Search Results*

Cogstone submitted a Sacred Lands File (SLF) search request to NAHC on October 29, 2019. This search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the Plan Area that could be affected by the Specific Plan. NAHC responded on December 11, 2019 with a negative SLF search, indicating no record for the presence of Native American Sacred Lands within the Plan Area. NAHC did however, note that the absence of specific site information in the SLF does not indicate the absence of Native American cultural resources in the Plan Area.

#### *Field Survey Results*

A field survey of the Plan Area was conducted by Cogstone staff on December 18, 2019. Due to the heavily developed condition of the Plan Area, the pedestrian survey consisted of 10-meter wide transects. Smaller 1-meter wide transects were utilized in the western portion of Plan Area along the boundary. No archaeological resources were observed in the Plan Area during the survey.

#### *Newly Recorded Buildings and Structures Evaluation Results*

On December 18 and 19, 2019, a historic built environments survey of the Plan Area was conducted by Cogstone's architectural historian. A total of 42 historic-aged buildings and structures were documented during the survey and are listed in Table 5.3-3. All historic-aged buildings and structures observed have undergone some degree of renovation or alterations within approximately the last 20 years. Two historic-aged buildings least affected by recent renovation are Building 7 and Building 27. The exterior of these buildings retains the majority of their original architectural features typical of Contemporary Style. All other historic-aged buildings exhibit significant alterations to their original architectural forms.

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CULTURAL RESOURCES**Table 5.3-3 Historic Resource Evaluation of Newly Recorded Buildings and Structures**

Building or Structure	Style	Description	Location	Year Built	Historic Resource Evaluation
Building 5	Spanish Revival Style	Residential Units	Southeast intersection of San Gabriel Avenue and West Williams	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 6	Spanish Revival Style	Residential Units	Southeast intersection of San Gabriel Avenue and West Williams	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 7	Contemporary Style	Residential Units	Northeast corner of the intersection of San Gabriel Avenue and West Williams	1963-1971	Retains integrity of <i>Location, Design, Materials, and Workmanship</i> . No longer retains integrity of <i>Setting, Feeling, , and Association</i> .
Building 8	Spanish Revival Style	Residential Units	Northeast of the intersection of San Gabriel Avenue and West Williams Street	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 9	Spanish Revival Style	Residential Units	Northeast of the intersection of San Gabriel Avenue and West Williams	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 10	Spanish Revival Style	Residential Units	Adjacent to San Gabriel Avenue	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 11	Spanish Revival Style	Residential Units	Northwest of the intersection of West Williams Street and River Avenue	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 12	Spanish Revival Style	Residential Units	North of the intersection of West Williams Street and River Avenue	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Buildings 13(1), 13(2), 13(3), and 13 (4)	Spanish Revival Style	Residential Units	Northeast of the intersection of West Williams Street and River Avenue	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Buildings 14(1), 14(2), 14(3), and 14(4)	Spanish Revival Style	Residential Units	Northeast of the intersection of West Williams Street and River Avenue	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 15	Spanish Revival Style	Residential Units	Facing West Williams Street in the northeast area of the Villages at Cabrillo	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 25	Spanish Revival Style	Residential Units	Southeast of the intersection of Willard Street and San Gabriel Avenue	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 27	Contemporary Style	Residential Units	Southeast of the intersection of Willard	1963-1971	Retains integrity of <i>Location, Design, Materials, and Workmanship</i> ., No

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**Table 5.3-3 Historic Resource Evaluation of Newly Recorded Buildings and Structures**

Building or Structure	Style	Description	Location	Year Built	Historic Resource Evaluation
			Street and San Gabriel River Road		longer retains integrity of <i>Setting, Feeling, and Association</i> .
Building 28	Contemporary Style	Residential Units	Southeast corner of the intersection of Williams Street and River Avenue	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 29	Spanish Revival Style	Residential Units	Southeast corner of the intersection of Williams Street and River Avenue	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Buildings 30(1), 30(2), 30(3), and 30(4)	Spanish Revival Style	Residential Units	South of Williams Street	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Buildings 31(1), 31(2), 31(3), and 31(4)	Spanish Revival Style	Residential Units	South of Williams Street	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Building 32	Spanish Revival Style	Residential Units	South of Williams Street	1963-1971	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport A	Utilitarian Style	Carport	North of Building 5 and west of Building 6	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport B	Utilitarian Style	Carport	Between Buildings 7(1-2) and 10 and south of Buildings 8 and 9	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport C	Utilitarian Style	Carport	East of Building 11 and south of Building 12	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport D	Utilitarian Style	Carport	South of Buildings 13 (1-4)	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport E	Utilitarian Style	Carport	South of Buildings 14(1-4)	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport F	Utilitarian Style	Carport	North of Building 15	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport G	Utilitarian Style	Carport	North of Building 25 and south of Willard Street	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .



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CULTURAL RESOURCES**Table 5.3-3 Historic Resource Evaluation of Newly Recorded Buildings and Structures**

Building or Structure	Style	Description	Location	Year Built	Historic Resource Evaluation
Carport H	Utilitarian Style	Carport	East of Building 28, north of Building 29, and west of Buildings 30(1-4)	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport I	Utilitarian Style	Carport	West of Buildings 30(1-4), north of Buildings 31(1-4), and west of Building 32	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .
Carport J	Utilitarian Style	Carport	North of Carport I and south of Williams Street	1965	Retains integrity of <i>Location</i> . No longer retains integrity of <i>Design, Setting, Materials, Feeling, Workmanship, and Association</i> .

Source: Cogstone 2020.

### 5.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- C-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
- C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- C-3 Disturb any human remains, including those interred outside of dedicated cemeteries.

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1; 14 CCR § 4852)

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The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold C-3

This impact will not be addressed in the following analysis.

### 5.3.3 Environmental Impacts

#### 5.3.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.3-1:** There are no historical resources in the Plan Area; development pursuant to the Specific Plan would not result in an impact on identified historic resources. [Threshold C-1]

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**Impact Analysis:** Under CEQA, a project has a significant impact on a historical resource if it “would result in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resources would be materially impaired” (CEQA Guidelines Section 15064.5(b)(1)). Material impairment would occur if the project would result in demolition or material alteration of those physical characteristics that convey the resource’s historical significance (CEQA Guidelines Section 15064.5(b)(2))

As concluded in the *Records Search Results* discussion of Section 5.3.1.2, *Existing Conditions*, there is currently no locally-, state-, or federally-designated historic resources in the Plan Area. Additionally, the Plan Area was not listed in any of the following state or federal resources: NRHP, CRHR, CHRI, CHL, or CPHI.

However, the CHRIS records search indicated that there are 18 previously recorded cultural resources, both in the Plan Area and within the one-mile search radius of the Plan Area, all of which are historic-built environment resources. Of these 18 recorded resources, six are located within the Plan Area and three still exist in the Plan Area—see Table 5.3-2, *Previously Recorded Cultural Resources In the Plan Area and Within a One-Mile Radius of the Plan Area*. Following is a description and analysis of the three remaining buildings identified in the Plan Area:

- **P-19-187683:** This building is currently called Building 47. Originally called Building 5002, it was first recorded in 1993 and was recommended as not eligible for the national or state registries or as a local designation because the building did not retain sufficient historical or architectural qualities. This building still exists and is in use in the Plan Area. In December 2019, this building was revisited by Cogstone’s architectural historian and details of this building were recorded in the California Department of Parks

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### CULTURAL RESOURCES

and Recreation (DPR) Form 523A<sup>1</sup>, which is provided as an appendix to the cultural and paleontological resources assessment report prepared for the Plan Area (Appendix D). Based on the additional review, Cogstone agreed with the previous determination that this building is not eligible for the national or state registries or as a local designation.

- **P-19-187684:** This building is currently called Buildings 46(1) and 46(2). Originally called Building 5004, it was first recorded in 1993 and was recommended as not eligible for the national or state registries or as a local designation as the building did not retain sufficient historical or architectural qualities. This building still exists and is in use in the Plan Area. In December 2019, this building was revisited by Cogstone's architectural historian and details of the building were recorded in DPR Form 523A, which is provided as an appendix to the cultural and paleontological resources assessment report prepared for the Plan Area (Appendix D). Based on the additional review, Cogstone agreed with the previous determination that this building is not eligible for the national or state registries or as a local designation.
- **P-19-187691:** This building is currently called "Building 39: Child Lane." Originally called Building 204: "Child Care Center," it was first recorded in 1993 and was recommended as not eligible for the national or state registries or as a local designation as the building did not retain sufficient historical or architectural qualities. This building still exists and is in use in the Plan Area. In December 2019, this building was revisited by Cogstone's architectural historian and details of this building were recorded in DPR Form 523A, which is provided as an appendix to the cultural and paleontological resources assessment report prepared for the Plan Area (Appendix D). Based on the additional review, Cogstone agreed with the previous determination that this building is not eligible for the national or state registries or as a local designation.

The following resources are located adjacent to the Plan Area.

- **P-19-190277 (Transmission Tower) and P-19-192309 (Transmission Lines):** These resources include the Southern California Edison Company's Long Beach-Laguna Bell 60kV and 220kV Transmission Lines. The resource was recorded and evaluated in 2016 by Audry Williams (SCE Archaeologist and Historic-Era Electrical Infrastructure Specialist). Williams detailed that the transmission towers include 290' tall multiple-circuit lattice steel towers that hold six 60kV circuits each, 310' tall double-circuit lattice steel towers that can hold two 220kV circuits, and approximately 94' tall 12-14-circuit tower constructed on three legs with two 55' bridges or a single 6-circuit tower constructed on two legs with a 55' bridge.

Williams recommended that the Long Beach-Laguna Bell 60kV and 220kV Transmission Lines are recommended eligible for listing in the NRHP and the CRHP under Criteria A/1 and C/3. This resource is currently documented in the Built Environment Resource Directory (BERD) with a status code of 2S2 (individual property determined eligible for NR by a consensus through Section 106 Process. Listed in the CR), however, this resource was not found as listed under the California Register of Historic Resources (CRHR). As of 2019, the section of P-19-192309, which is adjacent to the Plan Area, is still in existence

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<sup>1</sup> The California Department of Parks (DPR) 523 series of forms are used for recording and evaluating resources and for nominating properties as California Historical Landmarks, California Points of Historical Interest, and to the California Register of Historical Resources.

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with no notable changes as seen in its initial recoding in 2016. Cogstone concurs with Williams recommendation of eligibility.

The transmission tower and lines are located approximately 270 feet west of the Project area across from the Terminal Island Freeway (see Figure 5.3-1, *Historic-aged Buildings within the Plan Area*). Due to the distance between these resources and the Plan Area, the Project will not impact P-19-190277 and P-19-192309. In addition, the viewshed and setting of P-19-190277 and P-19-192309 has already been altered due to previous development in the vicinity. As such, the Project will not cause a substantial adverse change in the significance of this historic resource.

Implementation of the Specific Plan would be confined to the Plan Area and would not affect adjacent or nearby cultural resources. A total of 42 historic-aged buildings and structures were documented during the field survey and are listed in Table 5.3-3, *Historic Resource Evaluation of Newly Recorded Buildings and Structures*. All historic-aged buildings and structures observed have undergone some degree of renovation or alterations within approximately the last 20 years. Of the 42 historic-aged buildings and structure, 40 exhibit significant alterations to their original architectural forms, such as the addition of Spanish Revival elements (e.g., Buildings 5, 6 and 9 through 13). The two historic-aged buildings least affected by recent renovation are Building 7 and Building 27. The exterior of these buildings retains the majority of their original architectural features typical of Contemporary Style. However, as shown in the *Historic Resource Evaluation* column of Table 5.3-3 and substantiated in the cultural and paleontological resources assessment report (Appendix D), due to lack of associated significance and substantial architectural alterations, none of the 42 historic-aged buildings and structures within the Project Area are recommended as eligible for listing at the local, state, or national level; and are not considered historically significant. The buildings are not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States and, therefore, not recommended as eligible for listing under Criterion 1/A; they are not associated with the lives of persons important to local, California or national history and, therefore, not recommended as eligible for listing under Criterion 2/B; they do not embody the distinctive characteristics of a type, period, region or method of construction or represent the work of a master or possess high artistic values and, therefore, not recommended as eligible for listing under Criterion 3/C; and they have not yielded, nor has the potential to yield, information important to the prehistory or history of the local area, California or the nation and, therefore, not recommended as eligible for listing under Criterion 4/D. Accordingly, impacts to historic resources as a result of implementation the Specific Plan are considered less than significant.

Figure 5.3-1 - Historic-Aged Buildings in the Plan Area  
3. Project Description



- Plan Area Boundary
- P-19-192309
- Carport
- Historic Aged Building

0 275  
Scale (Feet)



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**Impact 5.3-2: Development pursuant to the Specific Plan would not result in an impact on archaeological resources. [Threshold C-2]**

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**Impact Analysis:** As shown in Figure 3-3, *Aerial Photograph*, the Plan Area is fully developed and in a highly urbanized area of the City. The Plan Area has been developed and redeveloped over the past seventy years; therefore, it has already been subjected to grading activities associated with existing development. As the Plan Area has already been previously disturbed and developed, it has already been subject to similar construction and ground-disturbing activities associated with the Specific Plan. Therefore, the archaeological sensitivity is considered low due to previous grading and excavation in the Plan Area.

Additionally, no archaeological resources were identified during prior development activities in the Plan Area—as concluded above under the CHRIS records search discussion—and it is unlikely that any such resources would be uncovered or affected during project-related grading and construction activities. The Plan Area and immediate surroundings are also not recognized as an area of potential sensitivity for archaeological resources. Additionally, based on the results of the cultural records search conducted by Cogstone, the Plan Area has a low sensitivity for prehistoric archaeological resources. Analysis of these data sources and historical USGS aerial photographs indicates that the Plan Area also has low sensitivity for buried historical archaeological features such as foundations or trash pits.

Furthermore, no prehistoric or historic archaeological resources were identified in the Plan Area during the intensive pedestrian survey conducted by Cogstone or during any previous investigations. These negative findings indicate that the potential for subsurface prehistoric or historic resource deposits is low.

Based on the preceding, impacts to archaeological resources as a result of development that would be accommodated by the Specific Plan are considered less than significant.

### 5.3.4 Cumulative Impacts

Implementation of the Specific Plan in conjunction with other planned projects in other areas of the City, in accordance with buildout of the Long Beach General Plan, could unearth unknown significant cultural resources or involve modifications to or demolition of existing buildings, some of which may be considered historic resources.

However, under existing applicable law, site-specific cultural resources investigations would be required for other projects before the City would permit ground disturbances or demolition or substantial alteration of existing structures. Such investigations would include some degree of surface-level surveying and identify resources on the affected project sites that are or appear to be eligible for listing on the national or state registers for historic resources. Such investigations would also be required to mitigate impacts (where needed) to reduce impacts and protect and preserve any identified cultural and/or historic resources. As a part of the investigations, a cultural resources records search of the CHRIS and a Sacred Land Files search would also be required.

Furthermore, no significant cultural resources were identified in the immediate vicinity of the Plan Area that if altered could combine with the effects of the Specific Plan to result in a cumulatively significant impact to

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cultural resources. As also demonstrated above, impacts to cultural resources as a result of implementation of the Specific Plan were determined to be less than significant.

In consideration of the preceding, the Specific Plan's contribution to cumulative cultural resource impacts would be rendered less than significant, and therefore, Specific Plan impacts would not be cumulatively considerable.

#### 5.3.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.3-1 and 5.3-2.

#### 5.3.6 Mitigation Measures

No potentially significant impacts have been identified and no mitigation measures are required.

#### 5.3.7 Level of Significance After Mitigation

Impacts were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

#### 5.3.8 References

Cogstone Resource Management Inc. 2020, November. Cultural and Paleontological Resources Assessment Report.



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### 5.4 ENERGY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for energy-related impacts associated with the Villages at Cabrillo Specific Plan (Specific Plan) and ways in which the Specific Plan would reduce unnecessary energy consumption, consistent with the suggestions contained in Appendix F of the CEQA Guidelines. Energy service providers to the Plan Area include Southern California Edison (SCE) for electrical service and Southern California Gas Company (SoCalGas) for natural gas. Modeling of energy data is included in Appendix C of this DEIR.

#### 5.4.1 Environmental Setting

PRC Section 21100(b)(3) requires that an EIR include a detailed statement identifying mitigation measures proposed to minimize significant effects on the environment, including but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the project description, environmental setting, and impact analysis portions of technical sections, as well as through mitigation measures and alternatives.

In accordance with Appendices F and G of the CEQA Guidelines, this EIR includes relevant information and analyses that address the energy implications of the Specific Plan. This section represents a summary of the Specific Plan's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the Specific Plan's energy implications, are discussed in greater detail elsewhere in this EIR, including Chapter 3, *Project Description*, and Sections 5.2, *Air Quality*, 5.6, *Greenhouse Gas Emissions*, and 5.14, *Transportation*.

##### 5.4.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to energy that are applicable to the Specific Plan are summarized below.

#### Federal Regulations

##### *Federal Energy Policy and Conservation Act*

The Energy Policy and Conservation Act (EPCA) of 1975 was established in response to the 1973 oil crisis. The Act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of U.S. crude oil (with a few limited exceptions). EPCA created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. CAFE Standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

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#### *Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991*

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 seeks "to develop a National Intermodal Transportation System that is economically efficient, environmentally sound, provides the foundation for the Nation to compete in the global economy and will move people and goods in an energy efficient manner." The Act imposes new planning and regulatory requirements on states and cities in developing transportation plans and program.

#### *Transportation Equity Act for the 21st Century (1998)*

The Transportation Equity Act for the 21st Century (TEA-21) authorizes over \$200 billion to improve the Nation's transportation infrastructure, enhance economic growth and protect the environment. TEA-21 builds on the initiatives established in the ISTEA along with the current programs with new initiatives to improve traffic safety and enhance the transportation system. It also creates new opportunities to improve air and water quality, restore wetlands and natural habitat, and rejuvenate urban areas through transportation redevelopment, increased transit and sustainable alternatives to urban sprawl.

#### *Energy Independence and Security Act of 2007*

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The Act sets increased Corporate Average Fuel Economy Standards; the Renewable Fuel Standard; appliance energy efficiency standards; building energy efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration (USEPA 2019).

#### *Update to Corporate Average Fuel Economy Standards (2021 to 2026)*

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. However, on March 30, 2020, the USEPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as The Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021-2026. However, a consortium of automakers and the state of California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers agreeing to the framework include Ford, Honda, BMW of North America, and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas (GHG) emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet these standards (California Air Resources Board (CARB) 2019).

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#### State Regulations

##### *Renewables Portfolio Standard*

The California Renewables Portfolio Standard (RPS) was established in 2002 under SB 1078 and was amended in 2006, 2011 and 2018. The RPS program requires investor-owned utilities (IOU), electric service providers (ESP), and community choice aggregators (CCA) to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. The California Public Utilities Commission (CPUC) is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the state.

All electricity retail sellers had an interim target between compliance periods to serve at least 27% of their load with RPS-eligible resources by December 31, 2017. In general, retail sellers either met or exceeded the interim 27% target and are on track to achieve their compliance requirements. California's three large IOUs collectively served 36% of their 2017 retail electricity sales with renewable power. The Small and Multi-Jurisdictional Utilities (SMJUs) and ESPs served roughly 27% of retail sales with renewables and CCAs collectively served 50% of retail sales with renewable power. (CPUC 2020). Senate Bill 350 (SB 350) was signed into law September 2015, establishing tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures. Senate Bill 100 (SB 100), passed in 2018, puts California on the path to 100% fossil-fuel free electricity by the year 2045 (California Energy Commission (CEC) 2017a).

##### *State Alternative Fuels Plan*

Assembly Bill 1007 requires the CEC to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with the CARB and in consultation with other federal, state, and local agencies to reduce petroleum consumption; increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen); reduce GHG emissions; and increase in-state production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels; result in significant improvements in the energy efficiency of vehicles; and reduce trips and vehicle miles traveled (VMT) through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (Assembly Bill 118, Statutes of 2007) proactively implements this plan (CEC 2007).

##### *Appliance Efficiency Regulations*

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods (CEC 2017b).

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#### *Title 24, Part 6, Energy Efficiency Standards*

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2019 (California Code of Regulations Title 24, Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020.

The 2019 standards were adopted to cut energy use in new homes by more than 50 percent and require installation of solar photovoltaic (PV) systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential PV systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar PV system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

#### *Title 24, Part 11, Green Building Standards*

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (California Code of Regulations Title 24, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. The mandatory provisions of CALGreen became effective January 1, 2011 and were last updated in 2016, which became effective on January 1, 2017. On October 3, 2018, the CEC adopted the voluntary standards of the 2019 CALGreen, which became effective on January 1, 2020.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, and site irrigation conservation, among others. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.

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#### *Assembly Bill 1493*

California vehicle GHG emission standards were enacted under Assembly Bill 1493 (“Pavley I”). Pavley I was a clean-car standard that reduced GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016, including a 30 percent reduction of GHG emissions in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA set more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles. In January 2012, CARB approved the Pavley Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025 new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

#### *Warren-Alquist Act*

Established in 1974, the Warren-Alquist Act created the CEC in response to the energy crisis of the early 1970s and the state’s unsustainable growing demand for energy resources. The CEC’s core responsibilities include advancing state energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation and preparing for energy emergencies. The Warren-Alquist Act is updated every year to address current energy needs and issues with its latest edition in January 2020.

#### *California Energy Action Plan*

On May 8, 2003, the CEC and CPUC approved the California Energy Action Plan (EAP). The plan establishes shared goals and proposes specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for California’s consumers and taxpayers. On August 25, 2005, the EAP II was approved which identifying further actions necessary to meet California’s future energy needs. Subsequently, in 2008, the EAP updated was published that examines the state’s ongoing actions in the context of global climate change.

### Local Regulations

#### *City of Long Beach Sustainable City Action Plan*

The City adopted the Sustainable City Action Plan in February 2010 (Long Beach 2010). The Sustainable City Action Plan is designed to guide the City’s future operational and policy decisions and includes the following environmental and sustainability goals related to energy demand reduction, energy efficiency, and renewable energy generation:

- LEED certified (or equivalent) of 100% of major city facilities by 2020.
- At least 5 million square feet of privately developed LEED certified (or equivalent) green buildings by 2020.

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- Double the number of LEED accredited professionals (or equivalent) in the City and community by 2012.
- Reduce electricity use in City operations by 25% by 2020.
- Reduce natural gas use in City operations by 15% by 2020.
- Facilitate the development of at least 2 Megawatts of solar energy on city facilities by 2020.
- Reduce community electricity use by 15% by 2020.
- Reduce community natural gas use by 10% by 2020.
- Facilitate the development of at least 8 Megawatts of solar energy within the community (private rooftops) by 2020.
- Establish a native landscape demonstration in every park 1 acre or larger by 2020.
- Convert 1,200 front yards to native or edible landscape by 2016.
- Reduce per capita use of potable water, exceeding the State mandate to achieve a demand reduction of 20% in per capita water use by the year 2020.
- Facilitate the installation of rain catchment systems at five City facilities by 2012.

#### *City of Long Beach Climate Action and Adaptation Plan*

In May of 2019, the City of Long Beach partially released its Draft Climate Action and Adaptation Plan (CAAP) in May of 2019 with adoption anticipated in 2021. The CAAP is intended to be utilized for purposes of GHG streamlining and to satisfy the requirements needed under CEQA Guidelines Section 15183 to be considered a qualified GHG reduction plan. Overall, the CAAP provides a framework for the City to reduce community-wide GHG emissions and comply with state regulations (e.g., Senate Bill 32 (SB 32)), and to also address the effects of climate change on the community. Under the CAAP, the City aims to achieve a per capita emissions target of 4.46 MTCO<sub>2</sub>e per capita for year 2030, which would coincide with the emissions reduction target established under SB 32. To achieve this target, the City would be required to reduce emissions by 998,000 MTCO<sub>2</sub>e relative to the emissions forecast for year 2030. In addition to the year 2030 target, the CAAP also includes a long-term net carbon neutrality goal for year 2045. This goal would require a reduction in GHG of 2,562,819 MTCO<sub>2</sub>e. To meet the 2030 reduction target, the CAAP includes 19 priority mitigation actions covering the transportation, building energy, and waste sectors. The following are the energy-related priority action measures:

- **BE-1:** Provide access to renewably generated electricity.
- **BE-2:** Develop a home energy assessment program.

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- **BE-3:** Provide access to energy efficiency financing, rebates, and incentives for building owners.
- **BE-4:** Promote community and solar microgrids.
- **BE-5:** Perform municipal energy audits.

#### 5.4.1.2 EXISTING CONDITIONS

##### Electricity

The Plan Area is in SCE's service area, which spans much of southern California—from Orange and Riverside counties in the south to Santa Barbara County in the west to Mono County in the north (CEC 2015a). Total electricity consumption in SCE's service area in gigawatt-hours (GWh) was 104,407 GWh in 2018 (CEC 2020a).<sup>1</sup> Sources of electricity sold by SCE in 2017, the latest year for which data are available, were:

- 32 percent renewable, consisting mostly of solar and wind
- 8 percent large hydroelectric
- 20 percent natural gas
- 6 percent nuclear
- 34 percent unspecified sources—that is, not traceable to specific sources (SCE 2018)<sup>2</sup>

##### *Estimated Existing Electricity Demands*

Total estimated existing (2020) electricity demand for the Plan Area is estimated at 5,295,391 kilowatt hours (kWh) per year.<sup>3</sup>

##### Natural Gas

Serving approximately 150,000 customers, LBER is the largest California municipal gas utility and the fifth largest municipal gas utility in the United States. LBER's service territory includes the cities of Long Beach and Signal Hill, and sections of surrounding communities including Lakewood, Bellflower, Compton, Seal Beach, Paramount, and Los Alamitos.

Long Beach receives a small amount of its gas supply directly into its pipeline system from local production fields that are located within the City's service territory, as well as offshore. Currently, the City receives approximately five percent of its gas supply from local production. The majority of the City's supplies are purchased at the California border, primarily from the Southwestern United States. The City, as a wholesale customer, receives intrastate transmission service for this gas from SoCalGas.

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<sup>1</sup> One GWh is equivalent to one million kilowatt-hours.

<sup>2</sup> The electricity sources listed reflect changes after the 2013 closure of the San Onofre Nuclear Generating Station, which is owned by SCE.

<sup>3</sup> Based on the historical CalEEMod electricity rates for the apartment mid-rise, general office, health club, regional shopping center, and enclosed parking structure with elevator.

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SoCalGas provides gas service in the City and has facilities throughout the City, including the Plan Area. The service area of SoCalGas spans much of the southern half of California, from San Luis Obispo County in the northwest to part of Fresno County in the north to Riverside County and most of San Bernardino County in the east to Imperial County in the southeast (CEC 2015b). Total natural gas supplies available to SoCalGas for years 2018 and 2019 are 3,055 million cubic feet per day (MMcf/day) and 3,385 MMcf/day, respectively (CGEU 2018). Total natural gas consumption in SoCalGas's service area was 722,247 MMcf for 2018, which is equivalent to 1,979 MMcf/day (CEC 2020b).

#### *Estimated Existing Natural Gas Demands*

Existing natural gas demands for the Plan Area is estimated at 9,900,123 kilo-British thermal units per year (kBTU/yr).<sup>4</sup>

### Transportation Fuels

In 2019, California consumed 15.4 billion gallons of gasoline and 3.1 billion gallons of diesel fuel (CDTFA 2020a; CDTFA 2020b). According to CARB's Emissions Factor (EMFAC) Database, on-road transportation sources within Los Angeles County consumed 11.2 million gallons of gasoline per day and 1.7 million gallons of diesel fuel per day on average in 2019.

#### *Estimated Existing Transportation Fuel Usage*

Table 5.4-1, *Existing Operation-Related Annual Fuel Usage*, shows the fuel usage associated with VMT currently generated under existing baseline conditions based on fuel usage data obtained from EMFAC2017, Version 1.0.2, and VMT data provided by Fehr & Peers (see Appendix I). The table provides fuel usage associated with the VMT associated with the Plan Area.

**Table 5.4-1 Existing Operation-Related Annual Fuel Usage**

Scenario	Gas		Diesel		Compressed Natural Gas		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	Gallons	VMT	kWh
Existing Year	14,988,202	614,254	676,769	63,739	26,762	7,379	154,382	51,567

Source: EMFAC2017 Version 1.0.2.

Note: VMTs based on daily VMT and average trip generation data provided by Fehr & Peers.

### 5.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- E-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- E-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

<sup>4</sup> Based on the historical CalEEMod natural gas rates for the apartment mid-rise, general office, health club, and regional shopping center.



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### 5.4.3 Environmental Impacts

#### 5.4.3.1 METHODOLOGY

Based on Appendix F, Energy Conservation, in order to ensure energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential impacts of proposed projects, with particular emphasis on avoiding or reducing wasteful, unnecessary, or inefficient use of energy resources as applicable. Environmental effects may include the proposed project's energy requirements and its energy use efficiencies by amount and fuel type during demolition, construction, and operation, the effects of the proposed project on local and regional energy supplies, the effects of the proposed project on peak and base period demands for electricity and other forms of energy, the degree to which the proposed project complies with existing energy standards, the effects of the proposed project on energy resources, and the proposed project's projected transportation energy use requirements and its overall use of efficient transportation alternatives, if applicable. The energy and fuel usage information provided in this section are based on the following:

- **Building Energy:** Building electricity and natural gas demands are based on the CalEEMod default natural gas and electricity usage rates. The CalEEMod historical energy rates, which are based on the 2005 Building Energy Efficiency Standards, are utilized for the existing buildings. New buildings are assumed to comply with the 2019 Building Energy Efficiency Standards and are modeled to be 10.2 percent and 1 percent more energy efficient for electricity and natural gas, respectively, compared to the 2016 Building Energy Efficiency Standards (NORESO 2018). Under the California Building and Energy Standards, residential buildings that are four stories and higher fall under the non-residential standards.
- **On-Road Vehicle Fuel Usage:** Fuel usage associated with operation-related vehicle trips are based on fuel usage data obtained from EMFAC2017, Version 1.0.2, and on daily VMT and average daily trip (ADT) generation data provided by Fehr and Peers (see Appendix I). In addition, fuel usage associated with construction-related vehicle trips (i.e., worker and vendor trips) are based on construction-related trips information provided and on CalEEMod defaults.
- **Off-Road Equipment Fuel Usage:** Fuel usage for construction-related off-road equipment is based on fuel usage data from OFFROAD2017, Version 1.0.1, with conservative estimates for anticipated construction (activities and equipment) and operations associated with the development phase of the Specific Plan (see DEIR Section Table 5.2-9, *Construction Activities, Phasing and Equipment: Worst-Case Development Phase*, for details regarding the anticipated construction schedule and equipment). This *Worst-Case Development Phase* is used to represent the construction-related fuels that could be required by the other anticipated development phases accommodated under the Specific Plan. This conservative estimate generally accounts for the largest amount of demolition and grading hauling activities and development that could occur within a given development phase.

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#### 5.4.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potential significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.4-1: Implementation of the Specific Plan would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation [Threshold E-1])**

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**Impact Analysis:** The following evaluates energy usage associated with construction and operation of land uses accommodated under the Specific Plan.

#### Short-Term Construction Impacts

Construction of the land uses accommodated under the Specific Plan would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use. Natural gas is not generally required to power construction equipment, and therefore is not anticipated to be used during construction phases. Table 5.4-2 provides an estimate of the potential energy and fuel usage from construction activities associated with the worst-case development phase of the Specific Plan. The energy data shown for the Full Buildout scenario is based on the total energy calculated for the worst-case phase and multiplied by 12, which is the potential number development phases that could occur under the Specific Plan. As stated under the Impact 5.2-2 discussion in this DEIR, construction activities associated with buildout of Specific Plan are anticipated to occur sporadically over approximately ten years or more. Buildout of the Specific Plan would comprise of either the same or reduced scope compared to the worst-case phase modeled and/or multiple smaller projects with each having its own construction timeline, activities, and construction equipment mix.

Construction activities associated with the land uses accommodated under the Specific Plan would require electricity use to power the construction equipment. The electricity use during construction would vary during different phases of construction: the majority of construction equipment during demolition and grading would be gas-powered or diesel-powered, while later construction phases would require electricity-powered equipment such as nail guns for interior construction and sprayers for architectural coatings. Overall, the use of electricity would be temporary in nature and would fluctuate according to the phase of construction. Additionally, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities.

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Table 5.4-2 Construction-Related Fuel Usage

Project Component	Gas <sup>1</sup>		Diesel <sup>1</sup>		Electricity <sup>1</sup>	
	VMt	Gallons	VMt	Gallons	VMt	kWh
<b>Worst-Case Phase</b>						
Construction Worker Commute	379,204	13,222	2,624	60	6,535	2,122
Construction Vendor Trips	7,112	1,382	81,601	9,618	n/a	n/a
Construction Haul Trips	6	1	7,095	1,006	n/a	n/a
Construction Off-Road Equipment	n/a	4,367	n/a	23,264	n/a	n/a
<b>Total</b>	<b>386,322</b>	<b>18,973</b>	<b>91,320</b>	<b>33,948</b>	<b>6,535</b>	<b>2,122</b>
<b>Full Buildout<sup>2</sup></b>						
Construction Worker Commute	4,550,447	158,664	31,488	717	78,425	25,460
Construction Vendor Trips	85,349	16,589	979,214	115,418	n/a	n/a
Construction Haul Trips	73	17	85,135	12,074	n/a	n/a
Construction Off-Road Equipment	n/a	52,403	n/a	279,169	n/a	n/a
<b>Total</b>	<b>4,635,870</b>	<b>227,673</b>	<b>1,095,837</b>	<b>407,377</b>	<b>78,425</b>	<b>25,460</b>

Source: CalEEMod Version 2016.3.2, EMFAC2017 Version 1.0.2, &amp; OFFROAD2017 Version 1.0.1.

Notes: VMt=vehicle miles traveled; kWh=kilowatt hour

<sup>1</sup> Based on calendar years 2023 and 2024 fuel usage and VMt data.<sup>2</sup> Based on worst-case phase multiplied by the anticipated 12 development phases.

Development projects would also temporarily increase demands for gasoline and diesel construction equipment. Construction of individual projects accommodated under the Specific Plan would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary, and all use of construction equipment would cease upon completion of project construction. Gasoline and diesel usage would also be associated with the transportation of construction employees and equipment to the Plan Area. These transportation energy uses depend on the type and number of trips, VMt, fuel efficiency of vehicles, and travel mode. To limit wasteful and unnecessary energy consumption, the construction contractors are required to minimize nonessential idling of construction equipment during construction in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9. In addition, electrical energy would be available for use during construction from existing power lines and connections, minimizing or avoiding the use of generators that are less efficient than tying into existing SCE infrastructure. Furthermore, construction trips would not result in unnecessary use of energy since the Plan Area is centrally located and is served by numerous regional freeway systems (including Interstate 710 which is approximately one mile from the Plan Area) that provide direct and efficient routes from various areas of the region. Furthermore, construction activities associated with future land use development projects accommodated under the Specific Plan would cease upon project completion. Overall, construction energy and fuel demands associated with land use developments accommodated under the Specific Plan would not be any more inefficient, wasteful, or unnecessary than similar development projects. Therefore, project-related construction activities would not result in wasteful or unnecessary energy demands, and impacts would be less than significant. Additionally, on-road vehicles associated with construction worker and vendor trips continue to become more fuel efficient over time.

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#### Long-Term Impacts During Operation

Operation of the new development projects accommodated under the Specific Plan would create additional demands for electricity and natural gas compared to existing conditions and would result in increased transportation energy use. Operational use of energy would include heating, cooling, and ventilation of buildings, water heating, operation of electrical systems, use of on-site equipment and appliances, and lighting.

#### *Non-Transportation Energy*

The estimated net electricity and natural gas consumption for the Specific Plan is shown in Table 5.4-3.

**Table 5.4-3 Building Electricity and Natural Gas Consumption**

Land Use	Electricity (kWh/year)	Natural Gas (kBTU/year)
Residential <sup>1</sup>	5,286,360	16,633,370
Amenities and Education <sup>2</sup>	1,029,509	1,698,850
Services/Administration <sup>3</sup>	891,282	731,862
Retail <sup>4</sup>	315,896	38,357
Parking Lot <sup>5</sup>	2,097,880	0
<b>Full Buildout Total<sup>6</sup></b>	<b>9,620,927</b>	<b>19,102,439</b>
Existing Energy Usage	5,295,391	9,900,123
<b>Net Change</b>	<b>4,325,536</b>	<b>9,202,316</b>

Source: CalEEMod Version 2016.3.2

Notes: kWh=kilowatt hour; kBTU=1,000 British thermal units

<sup>1</sup> Utilizes the apartment mid-rise land use category energy rates.

<sup>2</sup> Utilizes the health club land use category energy rates.

<sup>3</sup> Utilizes the general office land use category energy rates.

<sup>4</sup> Utilizes the regional shopping center land use category energy rates.

<sup>5</sup> Utilizes the enclosed parking structure with elevator land use category energy rates.

<sup>6</sup> Combined energy associated with the remaining existing land uses and the new proposed land uses.

#### ***Electricity***

Electricity service to the Plan Area would be provided by SCE through connections to existing offsite electrical lines. As shown in the Table 5.4-3, implementation of the Specific Plan would result in a net increase in electricity use by 4,325,536 kWh/year. While the Specific Plan would increase energy demand at the site compared to existing conditions, it would be required to comply with the latest applicable Building Energy Efficiency Standards and CALGreen.

Under the 2019 Building Energy Efficiency Standards, future residential buildings of three stories and less in the Plan Area would be required to install solar PV systems. Furthermore, under the Specific Plan design standards, streetlights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians and vehicles. While this design feature would not decrease electricity demand, it would increase the amount of renewable electricity available to offset electricity demand from SCE. In addition, building orientation would be designed to maximize natural daylight and ventilation for the residential units and could contribute in minimizing electricity lighting and cooling. Overall, because the existing buildings were built and designed to comply with older building standards, the newer buildings

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would be more energy efficient as they would be constructed in compliance with the Specific Plan design guidelines and energy efficiency regulatory requirements, and would also be more energy efficient due to the mechanical systems utilized (e.g., building insulation) within the building envelope.

Specific Plan operation is expected to result in a net increase of 4.3 million kilowatt hours (kWh) annually at buildout. SCE forecasts that it will have sufficient electricity supplies to meet demands in its service area; and the electricity demand due to the project is within the forecast increase in SCE's electricity demands. Specific Plan development would not require SCE to obtain new or expanded electricity supplies; impacts would be less than significant.

#### *Natural Gas*

As shown in Table 5.4-3, implementation of the Specific Plan would result in a net increase in natural gas demand by 9,202,316 kBTU/year compared to the existing uses. The City of Long Beach Gas and Oil Department forecasts that its natural gas supplies will increase by approximately 1 MMCF/day between 2019 and 2035. That amounts to an increase of 370 million kBTU (CGEU 2016). The forecast net increase in natural gas demands due to buildout under the Specific Plan is well within City forecasts of natural gas supplies, and therefore, would not require the City to obtain new or expanded natural gas supplies.

Furthermore, the Specific Plan would comply with the requirements of the current California Building Energy and Efficiency Standards and CALGreen. All new appliances would comply with the 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608).

Compliance with the Building Energy Efficiency Standards would contribute in minimizing natural gas demands. In addition, and as stated, building orientation would be designed to maximize natural daylight, which could also contribute in minimizing natural gas consumption for heating. Overall, as stated above, newer buildings accommodated under the Specific Plan would generally be more energy efficient compared to the existing buildings that would be replaced.

#### *Transportation Energy*

Vehicle trips associated with land use development projects accommodated under the Specific Plan would result in the consumption of transportation energy. Because the efficiency of the motor vehicles in use with the Specific Plan is unknown—such as the average miles per gallon—estimates of transportation energy use are based on the overall VMT and related transportation energy use. As shown in Table 5.4-4, implementation of the Specific Plan would result in an overall increase in VMT due to the increase in population and employment anticipated at buildout. However, implementation of the Specific Plan would also provide more employment opportunities and overall, would not hinder City's the jobs-housing ratio trend of moving towards a more balanced ratio (see Impact 5.11-1 of this DEIR). Furthermore, the Specific Plan includes the multi-use Wellness Trail for bicyclists and pedestrians which would implement a multi-modal approach to internal circulation within the Plan Area and prioritize pedestrian and bicycle orientation where feasible. Design features would include installation of traffic calming improvements, increased sidewalk widths, and mixed-use paths. As shown in Table 5.6-7, *Specific Plan Operation-Related VMT*, while total VMT and vehicle trips would increase with implementation of the Specific Plan compared to existing conditions,

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VTM per vehicle trip would decrease from 14.07 VTM/vehicle trip to 11.75 VTM/vehicle. The decrease in VTM per vehicle trip indicates the Specific Plan would result in more efficient use of transportation fuels compared to transportation fuel demands associated with the existing uses.

**Table 5.4-4 Net Operation-Related Fuel Usage**

	Gas		Diesel		Natural Gas		Electricity	
	Annual		Annual		Annual		Annual	
	VTM	Gallons	VTM	Gallons	VTM	Gallons	VTM	kWh
Full Buildout	23,147,479	693,379	1,414,115	101,752	38,033	10,828	1,053,088	316,042
Existing Year 2033 <sup>1</sup>	14,379,172	429,882	791,688	54,188	20,741	5,837	654,507	196,424
<b>Net Change</b>	<b>8,768,307</b>	<b>263,497</b>	<b>622,427</b>	<b>47,565</b>	<b>17,292</b>	<b>4,991</b>	<b>398,581</b>	<b>119,618</b>

Source: CalEEMod Version 2016.3.2; EMFAC2017 Version 1.0.2

Notes: VTM=vehicle miles traveled; kWh=kilowatt hour; SP=service population

<sup>1</sup> Based on existing conditions projected to buildout year of 2033 to provide a direct comparison to operation-related fuel usage.

### Summary

Overall, regulatory compliance (e.g., Building Energy Efficiency Standards, CALGreen, RPS, and CAFE standards) would increase building energy efficiency and vehicle fuel efficiency and reduce building energy demand and transportation-related fuel usage. Additionally, the Specific Plan includes components associated with its design guidelines, project design features, and planned circulation and mobility improvements that would contribute to minimizing building and transportation-related energy demands overall and demands on nonrenewable sources of energy. These components of the Specific Plan in conjunction with and complementary to regulatory requirements would ensure that energy demand associated with growth under the Specific Plan would not be inefficient, wasteful, or unnecessary. Therefore, energy impacts associated with implementation and operation of land uses accommodated under the Specific Plan would be less than significant.

**Impact 5.4-2: The Specific Plan would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency [Threshold E-2])**

**Impact Analysis:** The following evaluates consistency of the Specific Plan with California's RPS program and the energy-related goals and objectives of the City's Sustainable City Action Plan and Draft CAAP.

### California Renewables Portfolio Standard Program

The state's electricity grid is transitioning to renewable energy under California's RPS Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The RPS goals have been updated since adoption of Senate Bill 1078 in 2002. In general, California has RPS requirements of 33 percent renewable energy by 2020 (Senate Bill X1-2), 44 percent by 2024, 50 by 2026, 52 percent by 2027, 60 percent by 2030, and 100 percent by 2045. The RPS requirements established under SB 100 are also applicable to publicly owned utilities. The statewide RPS requirements do not directly apply to individual development projects, but rather to utilities and energy providers such as SCE, whose compliance with RPS requirements would contribute to the state objective of transitioning to renewable energy.

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The residential land uses accommodated under the Specific Plan would comply with the current and future iterations of the Building Energy Efficiency Standards and CALGreen. Under the 2019 Building Energy Efficiency Standards, future multifamily buildings of three stories and less in the Plan Area would be required to install solar PV systems while non-residential buildings and residential buildings of four stories and more would be required to be solar ready. Furthermore, the Specific Plan design guidelines require streetlights to include solar panels and batteries to generate and store renewable energy, which would be consistent with the statewide goal of transitioning the electricity grid to renewable sources. Therefore, implementation of the Specific Plan would not conflict or obstruct implementation of California's RPS Program, and no impact would occur.

### City of Long Beach Sustainable City Action Plan & Draft Climate Action and Adaptation Plan

The Sustainable City Action Plan includes goals related to increasing renewable energy use for the private sector and increasing overall energy efficiency. The CAAP also includes priority mitigation actions focused on energy and renewable energy generation. While many of the goals and priority mitigation actions apply specifically to municipal operations and actions, or public awareness measures, the Specific Plan is generally consistent with the overall objective of these two plans to increase energy efficiency and renewable energy. As stated above, streetlights would be required to include solar panels and batteries to generate and store solar energy. In addition, the Specific Plan design guidelines require proposed developments to have landscapes that include California native or adaptive plants. Furthermore, developments accommodated under the Specific Plan would be required to install low-flow water fixtures. These two components would contribute in conserving water, thereby reducing the amount of energy demand associated with the distribution and treatment of water. Also, as discussed above in Impact 5.4-1, building orientation would be designed to maximize natural daylight and ventilation for the residential units and could contribute in minimizing energy used for lighting, heating, and cooling. Therefore, the Specific Plan would not conflict with City's Sustainable City Action Plan and Draft CAAP, and no impact would occur.

### 5.4.4 Cumulative Impacts

The areas considered for cumulative impacts to electricity and natural gas supplies are the service areas of SCE and SoCalGas, respectively, described above in Section 5.4.1. Other projects would generate increased electricity and natural gas demands. However, all projects within the SCE and SoCalGas service areas would be required to comply with the Building Energy Efficiency Standards and CALGreen, which would contribute to minimizing wasteful energy consumption. Furthermore, the Specific Plan includes components that would support increasing renewable sources of energy and energy efficiency in addition to active transit that would also contribute to minimizing wasteful energy consumption. Therefore, cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

### 5.4.5 Level of Significance Before Mitigation

With implementation of regulatory requirements, the following impacts would be less than significant: 5.4-1 and 5.4-2.

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#### 5.4.6 Mitigation Measures

No mitigation measures are necessary because there were no significant impacts identified under the applicable thresholds.

#### 5.4.7 Level of Significance After Mitigation

Because no mitigation measures are required, impacts are the same as described in Section 5.4.6.

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### 5.5 GEOLOGY AND SOILS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Villages at Cabrillo Specific Plan (Specific Plan) to impact geological and soil resources, paleontological resources, or unique geologic features in the City of Long Beach. The analysis in this section is based in part on the following sources:

- *Cultural and Paleontological Resources Assessment Report for the Century Villages at Cabrillo*, Cogstone, November 2020 (“Cultural and Paleontological Resources Assessment Report”).
- *Geotechnical Engineering Investigation Proposed Residential Complex Century Village at Cabrillo (CVC) Phase VI*, Geotechnologies, Inc., November 2019 (“Geotechnical Investigation”).

Complete copies of these technical reports are included in Appendix D and E of this DEIR, respectively.

#### 5.5.1 Environmental Setting

##### 5.5.1.1 REGULATORY BACKGROUND

State and local laws, regulations, plans, or guidelines related to geology and soils that are applicable to the Specific Plan are summarized below.

##### Federal

##### *Earthquake Hazards Reduction Act*

The Earthquake Hazards Reduction Act was enacted in 1997 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the act established the National Earthquake Hazard Reduction Program (NEHRP), which refined the description of agency responsibilities, program goals, and objectives. NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities, improvement of building codes and land use practices, risk reduction through post-earthquake investigations and education, development and improvement of design and construction techniques, improvement of mitigation capacity, and accelerated application of research results. NEHRP designates the Federal Emergency Management Agency as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

##### *Uniform Building Code*

Published by the International Conference of Building Officials, the Uniform Building Code (UBC) provides standards for the development of better building construction and greater safety to the public. The UBC was updated every three year with its final publication in 1997. The UBC provides the basis for developing the

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California Building Code and contains provisions for administrative, fire- and life-safety and field inspection, structural, and engineering design.

#### State

##### *California Alquist-Priolo Earthquake Fault Zoning Act*

The California Alquist-Priolo Earthquake Fault Zoning Act was signed into state law in 1972, with its primary purpose to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. This act (or state law) was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The act requires the State Geologist (California Geologic Survey, CGS) to delineate regulatory zones known as “earthquake fault zones” along faults that are “sufficiently active” and “well defined” and to issue and distribute appropriate maps to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Pursuant to this act and as stipulated in Section 3603(a) of the California Code of Regulations, structures for human occupancy are not permitted to be placed across the trace of an active fault. The act also prohibits structures for human occupancy within 50 feet of the trace of an active fault, unless proven by an appropriate geotechnical investigation and report that the development site is not underlain by active branches of the active fault, as stipulated in Section 3603(a) of the California Code of Regulations. Furthermore, the act requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting, as stipulated in Section 3603(d) of the California Code of Regulations.

##### *Seismic Hazard Mapping Act*

The Seismic Hazard Mapping Act was adopted by the state in 1990 for the purpose of protecting the public from the effects of nonsurface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure caused by earthquakes. The goal of the act is to minimize loss of life and property by identifying and mitigating seismic hazards. The CGS prepares and provides local governments with seismic hazard zones maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures.

##### *California Building Code*

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission, and the code is under Title 24, Part 2, of the California Code of Regulations. The CBC provides minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground shaking with a specified

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probability at a site. The 2019 CBC took effect on January 1, 2020, and is codified and incorporated by reference in Chapter 18.40 (Building Code) of the LBMC.

#### *Requirements for Geotechnical Investigations*

Requirements for geotechnical investigations are included in CBC Appendix J, Grading, Section J104.3, Geotechnical Reports; additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are contained in California Health and Safety Code Sections 17953 to 17955 and in CBC Section 1803 (Geotechnical Investigations). Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be conducted as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness. CBC Section J106 (Excavations) establishes requirements for inspection and observation during and after grading.

#### *California Public Resources Code*

PRC Sections 5097.5 and 30244 require the assessment and management of paleontological resources. Requirements in these statutes include reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, defines the removal of paleontological “sites” or “features” from state lands as a misdemeanor, and prohibits the removal of any paleontological “site” or “feature” from State land without permission of the jurisdictional agency.

### Local

#### *City of Long Beach Municipal Code*

The City adopted the most recent CBC (2019) and California Residential Code (CRC, 2019) by reference, with certain amendments, into Chapter’s 18.40 (Building Code) and Chapter 18.41 (Residential Code), respectively, of the LBMC.

#### *City of Long Beach General Plan*

The City of Long Beach General Plan Seismic Safety Element outlines the goals and policies required to reduce the loss of life, injuries, damage to property, social and economical impacts resulting from seismic hazards. The Seismic Safety Element includes advance planning recommendations for land use including giving priority to low risk type projects such as low rise buildings and open space in areas of known seismic hazards. Additionally, the Seismic Safety Element also includes immediate action recommendations for structure and design, including discouragement of new unfavorable site/structure combinations and no structures for human occupancy within the Alquist-Priolo Special Studies Zones. The Conservation Element includes soils management goals including minimizing activities which will have a critical or detrimental effect on geologically unstable areas and soils subject to erosion.

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#### 5.5.1.2 EXISTING CONDITIONS

##### Regional Setting

The Plan Area is in the Los Angeles Basin, a coastal plain at the north end of the Peninsular Ranges Geomorphic Province. The Peninsular Ranges Geomorphic Province is characterized by mountain ranges separated by northwest-trending valleys, and it extends from southwestern California south into Mexico. The Los Angeles Basin is bounded by the Santa Monica Mountains and San Gabriel Mountains on the north, the Santa Ana Mountains on the east, and the Pacific Ocean on the south and west. The Santa Monica Mountains and San Gabriel Mountains are part of the Transverse Ranges Geomorphic Province, an east-west-trending series of steep mountain ranges and valleys extending from Santa Barbara County in the west to central Riverside County in the east.

##### Local Setting

###### *Geological Conditions*

The Plan Area is relatively flat with minor elevation changes as it slopes downwards to the southwest. Most of the Plan Area consists of existing fill and natural alluvium. The geologic units underlying the Plan Area are mapped entirely as late Pleistocene to Holocene young alluvium (unit 2) which was deposited between 126,000 years ago through historic times. Fill was encountered at 2.5 to 3 feet below the existing grade, which consists of sandy silt, silty sand, and sand. Fill soils are yellowish to dark brown, moist, firm, medium dense, and fine grained while natural alluvium soils consist of silty sands, sandy silts, and silty clays and are yellowish to dark brown or gray in color, moist to wet, loose to very dense, and primary finely grained (Geotechnologies 2019).

###### *Groundwater*

Groundwater was encountered at depths of 4.5 to 8 feet below existing grade (Geotechnologies 2019). The historical high groundwater levels under the Plan Area is approximately 15 feet below ground surface.

##### Geologic and Seismic Hazards

###### *Faults*

Faults showing evidence of surface displacement within the last 11,000 years are classified as active by the California Geological Survey. The Plan Area is not in an Alquist-Priolo Earthquake Fault Zone, and no evidence of faulting was identified during the Geotechnical Investigation (Geotechnologies 2019). The nearest Alquist-Priolo Earthquake Fault Zone to the Plan Area is the Newport-Inglewood Fault, which is an active fault about 2.4 miles to the northeast (CGS 2020). Other active faults in the region include the Palos Verdes Fault Zone, offshore about 7 miles to the south, and the Whittier Fault about 15 miles to the northeast (CGS 2020).

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#### *Historical Earthquakes*

There have been no notable earthquakes, of a magnitude of 5.5 or more, affecting the Long Beach region within the last 50 years. The most recent earthquakes closest to the Plan Area were the 1941 Torrance-Gardena Earthquakes which occurred to the northeast and southwest of the Plan Area both having a magnitude of 4.8 (SCEDC 2020a).

#### *Long Beach Earthquake*

The Long Beach Earthquake of 1933, which occurred on the Newport-Inglewood Fault and had a magnitude estimated at 6.4, caused 120 deaths and over \$50 million in property damage. Severe property damage occurred in Compton, Long Beach, and other cities in the area. Most of the damage was due to land fill, deep water-soaked alluvium or sand, and poorly-designed buildings. Minor disturbances of groundwater, secondary cracks in the ground, and slight earth slumps occurred, but surface faulting was not observed. Along the shore between Long Beach and Newport Beach, the settling or lateral movement of road fills across marshy land caused much damage to the concrete highway surfaces and to approaches to highway bridges.

In Compton, almost every building in a three-block radius on unconsolidated material and land fill was destroyed. In Long Beach, buildings collapsed, houses were pushed from foundations, walls were knocked down, and tanks and chimneys fell through roofs (Geology 2020). Many school buildings were destroyed, but students were not at school when the 5:54 PM quake occurred. The earthquake led to passage of the Field Act regulating construction of public school buildings in California (SCEDC 2020b).

#### *Surface Fault Rupture*

Ground rupture due to a fault movement typically results in a small percentage of total impact caused by an earthquake. Due to the distance of the Plan Area to a known active fault (approximately 2.4-miles northeast), the potential for surface fault rupture at the Plan Area is considered low (Geotechnologies 2019).

#### *Seismic Ground Shaking*

Horizontal ground acceleration, which frequently results in widespread damage to structures, is estimated as a percentage of *g*, the acceleration of gravity. The damage that an earthquake will cause to a structure depends on the earthquake's size, location, distance, and depth, the types of rock and soil at the surface of the site, and the type of construction of the structure.

When comparing the sizes of earthquakes, the most meaningful feature is the amount of energy released. Thus, scientists most often consider seismic moment, a measure of the energy released when a fault ruptures. We are more familiar, however, with scales of magnitude, which measure amplitude of ground motion. The energy released by an earthquake is measured as moment magnitude (*M<sub>w</sub>*). The moment magnitude scale is logarithmic; therefore, each one-point increase in magnitude represents a 10-fold increase in amplitude of the waves as measured at a specific location and a 32-fold increase in energy. That is, a magnitude 7 earthquake produces 100 times (10 x 10) the ground motion amplitude of a magnitude 5 earthquake.

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#### Geologic Hazards

##### *Liquefaction and Related Ground Failure*

Liquefaction is a process whereby strong earthquake shaking causes sediment layers that are saturated with groundwater to lose strength and behave as a fluid. This subsurface process can lead to near-surface or surface ground failure that can result in property damage and structural failure. If surface ground failure does occur, it is usually expressed as lateral spreading, flow failures, ground oscillation, and/or general loss of bearing strength. Sand boils (injections of fluidized sediment) can commonly accompany these different types of failure.

In order to determine a region's susceptibility to liquefaction, three major factors must be analyzed. These include:

- The intensity and duration of ground shaking.
- The age and textural characteristic of the alluvial sediments. Generally, the younger, less well compacted sediments tend to have a higher susceptibility to liquefaction. Textural characteristics also play a dominant role in determining liquefaction susceptibility. Sand and silty sands deposited in river channels and floodplains tend to be more susceptible to liquefaction and floodplains tend to be more susceptible to liquefaction than coarser or finer grained alluvial materials.
- The depth to the groundwater. Groundwater saturation of sediments is required in order for earthquake induced liquefaction to occur. In general, groundwater depths shallower than 10 feet to the surface can cause the highest liquefaction susceptibility.

The entire Plan Area is within a liquefaction zone as identified in the State of California Seismic Hazard Zones Map (Long Beach Quadrangle) (CGS 1999). Additionally, liquefaction analysis performed during the Geotechnical Investigation indicated that soil layers at various depths below the ground surface would be susceptible to liquefaction (Geotechnologies 2019). The Standard Penetration Test concluded that liquefaction settlements range from 5.58 to 7.34 inches while the Cone Penetration Test concluded that liquefaction settlements range from 5.47 to 7.18 inches (Geotechnologies 2019).

##### *Lateral Spreading*

Lateral spreading is a form of seismic ground failure due to liquefaction in a subsurface layer. Sediments with corrected (NI)60 values greater than 15 are generally not susceptible to lateral spreading. Based on the sediments encountered at the Plan Area, the upper layers with depths of approximately 15 to 35 feet have corrected (NI)60 values less than 15 and depths below 35 feet have corrected (NI)60 values greater than 15. Therefore, the upper layers are considered to be susceptible to lateral spreading. However, based on the relatively flat topography of the Plan Area and its surroundings and the lack of significant nearby free faces, the potential for lateral spreading is considered low (Geotechnologies 2019).



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#### *Earthquake-Induced Landslides*

The Plan Area is relatively flat with very minor elevation changes. The State of California Seismic Hazard Zones Map (Long Beach Quadrangle) indicates that the Plan Area is not within an Earthquake-Induced Landslide Zone (CGS 1999). Additionally, the County of Los Angeles Landslide Inventory Map and Seismic Safety Element of the City of Long Beach General Plan indicate that the Plan Area is not within an area susceptible to landslides. Therefore, the potential of landslides at the Plan Area is considered low.

#### *Expansive Soils*

Expansive soils shrink or swell as the moisture content decreases or increases; the shrinking or swelling can shift, crack, or break structures built on such soils. Results of the Geotechnical Investigation concluded that the composition of onsite materials is in the very low expansive range with an Expansion Index of 10 (Geotechnologies 2019).

#### *Subsidence*

Subsidence is a regional lowering of the ground surface. The major cause of ground subsidence is withdrawal of groundwater; withdrawal of oil and gas can also cause subsidence. Subsidence due to oil and gas withdrawal has occurred in the Long Beach Harbor area and along the coast extending eastward to the City of Seal Beach, amounting up to 30 feet in the center of the Long Beach Harbor. Water injection has been used to stabilize the area since 1958; soil has also been imported to help keep port land uses usable (Long Beach 2004).

#### *Corrosive Soils*

Corrosive soils can lead to deterioration of buried structures such as underground utilities. Results of the Geotechnical Investigation indicated that the near-surface soils are considered severely corrosive to ferrous metals (metals that contain mostly iron) and aggressive to aluminum (Geotechnologies 2019).

#### *Collapsible Soils*

Collapsible soils are low-density, silty to very fine-grained, predominantly granular soils, containing minute pores and voids. When saturated, these soils undergo a rearrangement of their grains and a loss of cementation, causing substantial, rapid settlement under even relatively low loads. A rise in the groundwater table or an increase in surface water infiltration, combined with the weight of a building or structure, can cause rapid settlement and consequent cracking of foundations and walls. The upper few feet to several feet of existing soils on a project site – whether native soils or soils on a developed site – are often unsuitable to support a building. Geotechnical investigation reports provide recommendations for site preparation, excavation, and grading, including replacement of existing soils with engineered fill soils capable of supporting a building.

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#### Paleontological Resources

The Plan Area is in the Los Angeles Basin and part of the costal section of the northernmost Peninsular Range Geomorphic Province. The Peninsular Ranges Geomorphic Province is characterized by northwest-trending mountain ridges separated by sediment-floored valleys and bounded by the Transverse Ranges Geomorphic Province to the north and the Colorado Desert Geomorphic Province to the east. The geologic units underlying the Plan Area are mapped entirely as late Pleistocene to Holocene young alluvium (unit 2) which was deposited between 126,000 years ago and through into historic times. These deposits consists of poorly sorted, permeable clays to sands. Fossils of Monterey cypress, Monterey pine, and Torrey pine have been found in middle to late Pleistocene deposits (Cogstone 2020).

#### 5.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- G-1 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.
- G-2 Result in substantial soil erosion or the loss of topsoil.
- G-3 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.
- G-4 Be located on expansive soil, as defined in Table 18-1B of the Uniform building Code (1994), creating substantial direct or indirect risks to life or property.
- G-5 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.
- G-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

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- Threshold G-1i
- Threshold G-1iv
- Threshold G-2
- Threshold G-5

These impacts will not be addressed in the following analysis.

### 5.5.3 Environmental Impacts

#### 5.5.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.5-1: Future development in the Plan Area pursuant to the Specific Plan would expose increased numbers of persons and structures to strong ground shaking from active faults in the region. [Threshold G-1.ii]**

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**Impact Analysis:** The most significant geologic hazard to development accommodated by the Specific Plan is the potential for moderate to strong ground shaking resulting from earthquakes generated on the faults in seismically active southern California. As with other areas in southern California, it is anticipated that strong ground shaking can be expected to occur during the design lifetimes of structures that would be built pursuant to the Specific Plan. Specifically, buildout in accordance with the Specific Plan would result in a total of 1,380 dwelling units, 79,350 square feet of amenities, 15,000 square feet of educational uses, 22,850 square feet of commercial/retail uses, and 67,050 square feet of administrative and supportive services, accounting for the new development and the existing development which will remain in the Plan Area. The Specific Plan would attract 2,100 residents to the Plan Area, potentially exposing increased numbers of persons and structures to strong ground shaking.

As noted above, the Newport-Inglewood Fault is approximately 2.4 miles to the northeast (CGS 2020). This active fault, as well as others in the region (including the Palos Verdes Fault Zone, offshore about 7 miles to the south, and the Whittier Fault about 15 miles to the northeast) are considered capable of producing strong shaking at the Plan Area, thereby exposing people or structures onsite to potential substantial adverse effects, including the risk of loss, injury, or death. Earthquakes along active faults are generally capable of generating ground shaking of engineering significance to the Plan Area. The intensity of ground shaking on the Plan Area would depend on the magnitude of the earthquake, distance to the epicenter, and the geology of the area between the epicenter and the Plan Area.

However, the Plan Area is not at a greater risk of seismic activity or impacts than other sites in southern California. Seismic shaking is a risk throughout Southern California. Additionally, California and the City regulate development in the City through a variety of tools that reduce geologic hazards, including earthquakes. For example, the state regulations protecting human-occupied structures from geoseismic hazards are provided in the most recent CBC and CRC. The CBC and CRC, both adopted by reference in the

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City's municipal code, contain provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. For example, the CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site. The design and construction of future development projects that would be accommodated by the Specific Plan would be required to adhere to the provisions of the CBC and CRC, which are imposed on project developments by the City's Development Services Department during the development review and building plan check process. Compliance with the requirements of the CBC and CRC for structural safety during a seismic event would reduce hazards from strong seismic ground shaking.

Furthermore, requirements for geotechnical investigations are included in CBC Appendix J (Grading), Section J104.3 (Geotechnical Reports). Future development projects accommodated by the Specific Plan would be required to have site-specific geotechnical investigation reports prepared by the project applicant's/developer's geotechnical consultant, in accordance with the CBC. The geotechnical investigations would determine seismic design parameters for the site and the proposed building type per CBC requirements. For example, testing of samples from subsurface investigations (such as from borings or test pits) would be undertaken as a part of the geotechnical report. The soil samples would be analyzed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, expansiveness, and other characteristics and factors. Also, CBC Section 1705.6 establishes requirements for inspection and observation during and after grading. Compliance with the design parameters and recommendations of the geotechnical investigation reports and the provisions of the CBC would be required as a condition of a grading permit and/or building permit, and would be ensured by the City's Development Services Department during the development review and building plan check process.

In summary, compliance with the provisions of the CBC and required implementation of the recommended design recommendations outlined in the geotechnical reports—which as noted above, is required to be prepared pursuant to the CBC—would reduce hazards arising from strong seismic ground shaking. Therefore, impacts resulting from strong ground shaking would be less than significant.

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#### **Impact 5.5-2: Future development in the Plan Area pursuant to the Specific Plan would subject persons and structures to hazards from liquefaction. [Threshold G-1.iii]**

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**Impact Analysis:** Liquefaction occurs when three general conditions coexist: 1) shallow groundwater; 2) low density non-cohesive (granular) soils; and 3) high-intensity ground motion. According to the Geotechnical Investigation, the entire Plan Area is within a liquefaction zone and the subsurface conditions are considered to be susceptible to liquefaction (Geotechnologies 2019). Therefore, development within Plan Area pursuant to the Specific Plan could expose people and structures to seismic-related ground failure from liquefaction.

However, future development projects accommodated by the Specific Plan would be required to have site-specific geotechnical investigation reports prepared by the project applicant's/developer's geotechnical consultant, in accordance with Appendix J (Grading) Section J104.3 (Geotechnical Reports) of the CBC. Such investigation would assess liquefaction potential on individual development sites and provide any

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needed recommendations to minimize hazards from liquefaction. For example, recommendations from the Geotechnical Investigation include implementation of ground improvement techniques for building construction, such as the installation of aggregate piers. Implementation of the recommendations during the design and construction phases of development projects accommodated by the Specific Plan would mitigate the potential for surface manifestations of liquefaction and a loss in bearing strength (Geotechnologies 2019). Compliance with CDC Appendix J, Section 104.3, the recommendations of the individual geotechnical investigation reports would be required as a condition of approval prior to grading permit and/or building permits and would be ensured by the City's Development Services Department during the development review and building plan check process. Therefore, impacts resulting from hazards due to liquefaction would be less than significant.

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**Impact 5.5-3: Future development in the Plan Area pursuant to the Specific Plan could subject persons or structures to hazards arising from off-site landslide, lateral spreading, subsidence, collapsible soils, or expansive soils. [Thresholds G-3 and 4]**

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**Impact Analysis:** The potential impacts resulting from development in the Plan Area pursuant to the Specific Plan are addressed below.

#### Landslides and Lateral Spreading

Slope failures in the form of landslides are common during strong seismic shaking in areas of steep hills. The Plan Area generally flat with no significant slopes. The State of California Seismic Hazard Zones Map (Long Beach Quadrangle), the County of Los Angeles Landslide Inventory Map and Seismic Safety Element of the City of Long Beach General Plan indicate that the Plan Area is not within an area susceptible to landslides. Additionally, landslides are not expected to occur at the Plan Area since the site and its surroundings are relatively flat. Therefore, no impacts related to landslides are anticipated.

Lateral spreading is a phenomenon that occurs in association with liquefaction and includes the movement of non-liquefied soil materials. As discussed in Section 5.1.1.2, results of the geotechnical report indicated that the potential for lateral spreading is considered low (Geotechnologies 2019). Therefore, impacts associated with lateral spreading would be less than significant.

#### Subsidence, Collapsible, Expansive, and Corrosive Soils

##### *Subsidence and Collapsible Soils*

The major cause of ground subsidence is the excessive withdrawal of groundwater. Soils with high silt or clay content are particularly susceptible to subsidence. Based on the conditions encountered in the borings conducted for the Geotechnical Investigation, groundwater was encountered at depths of 4.5 to 8 feet below existing grade, and historical high groundwater levels under the Plan Area is approximately 15 feet below ground surface (Geotechnologies 2019). Collapsible soils shrink upon being wetted and/or subjected to a load. As the soils consisting of existing fill and native soils are not considered suitable to support new structures accommodated by the Specific Plan, removal and recompaction of the upper 1 to 2 feet of soils prior to foundation excavation, placement of floor slabs, or additional fill was recommended in the

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Geotechnical Investigation. Other recommendations included a number of grading guidelines, including but not limited to:

- Removal of all vegetation, existing fill, and soft or disturbed earth materials from areas to receive controlled fill.
- Compaction of loose soils and placement of controlled fill.
- Conduction of field observations and testing by a geotechnical engineer during grading to assist the construction contractor in addressing compaction and proper moisture content.

Additionally, future development projects accommodated by the Specific Plan would be required to have site-specific geotechnical investigation reports prepared by the project applicant's/developer's geotechnical consultant, in accordance with Appendix J (Grading) Section J104.3 (Geotechnical Reports) of the CBC. Such investigation would assess hazardous soil conditions onsite and would provide recommendations as needed to minimize these potential soils hazards. Further, CBC Section 1705.6 sets forth requirements for inspection and observation during and after grading. Compliance with the recommendations of the geotechnical reports and CBC is required as a condition of approval prior to a grading permit and/or building permit and would be ensured by the City's Development Services Department during the development review and building plan check process. Therefore, impacts resulting from collapsible soils and subsidence would be less than significant.

#### *Corrosive Soils*

Results of the Geotechnical Investigation indicated that the near-surface soils are considered severely corrosive to ferrous metals (metals that contain mostly iron) and aggressive to aluminum (Geotechnologies 2019). The corrosivity findings were based on a soil corrosivity study prepared by a geotechnical engineer and provided as an appendix to the Geotechnical Investigation. Corrosion control recommendations in the soil corrosivity study included but are not limited to:

#### *Steel Pipe*

- Install underground steel pipe with rubber gasketed, mechanical, grooved end, or other nonconductive type joints. Pipes should be bonded for electrical continuity, which is necessary for corrosion monitoring and cathodic protection.
- Installation of corrosion monitoring test stations to facilitate corrosion monitoring and the application of cathodic protection.

#### *Hydraulic Elevators*

- Coat hydraulic elevator cylinders with a suitable dielectric coating intended for underground use.
- Electrically insulate each cylinder from building metals by installing dielectric material between the piston platen and car, insulating the bolts, and installing an insulated joint in the oil line.

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Additionally, as noted above, future development projects accommodated by the Specific Plan would be required to have site-specific geotechnical investigation reports prepared by the project applicant's/developer's geotechnical consultant, in accordance with Appendix J (Grading) Section J104.3 (Geotechnical Reports) of the CBC and to comply with all applicable regulatory measures. CBC Section 1705.6 sets forth requirements for inspection and observation during and after grading. Compliance with the recommendations of the geotechnical reports and CBC is required as a condition of approval prior to a grading permit and/or building permit and would be ensured by the City's Development Services Department during the development review and building plan check process. Therefore, impacts resulting from corrosive soils would be less than significant.

#### *Expansive Soils*

Results of the Geotechnical Investigation indicated that onsite soils have a very low expansive potential (Geotechnologies 2019). Therefore, no impact associated with expansive soils would occur.

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**Impact 5.5-4: Build out of the Specific Plan could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature [Threshold G-6]**

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**Impact Analysis:** The Cultural and Paleontological Resources Assessment Report included thorough background research and analysis, geologic map and literature reviews, and previous locality data searches, to evaluate the paleontological sensitivity of the Plan Area. Specifically, the Cultural and Paleontological Resources Assessment Report included a paleontological records search with the Natural History Museum of Los Angeles County (LACM) as well as a field survey of the Plan Area on December 18, 2019. The survey consisted of walking in parallel transects spaced at approximately 10-meter intervals while closely inspecting the ground surface. The type of sediment and land formations were also noted in order to assess the potential for paleontological sensitivity. Existing ground disturbances (e.g. cutbanks, ditches, animal burrows, etc.) were also visually inspected to get a sense of subsurface deposits and soil horizons.

No archaeological or paleontological resources were observed within the Plan Area during the field survey (Cogstone 2020). The record search conducted with LACM also found no recorded paleontological localities producing vertebrae fossils in or within one-mile of the Plan Area. However, seven localities from Pleistocene deposits between one to three miles and sixteen localities between three to ten miles from the Plan Area were found. These localities include mammoth, horse, tapir, pronghorn antelope, camel, and bison megafauna. All fossils were at least 5 feet deep in deposits and mapped as late Pleistocene at the surface while fossils starting at 24 feet deep were mapped as Holocene (Cogstone 2020).

In order to assess the sensitivity of sediments for fossils to occur in the Plan Area, the Potential Fossil Yield Classification (PFYC) system developed by the Bureau of Land Management (BLM) was used. The PFYC system uses the geological setting and number of known fossil localities to determine the paleontological sensitivity of site. Using the PFYC system, geologic units are classified according to the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts within the known extent of the geological unit. The PFYC system ranks paleontological sensitivity using a scale of 1 to 5 (1 being very low; 5 being very high).

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The Plan Area is mapped entirely as middle to late Pleistocene older alluvium. The records search indicated that all previously recovered fossils were at least five feet deep and mapped as Pleistocene at the surface. Sediments with a Holocene component produced fossils starting at 24 feet deep. As shown in Table 5.5-1, sediments less than 20 feet below the surface are assigned a low potential for fossil (PFYC 2) due to the lack of fossils in these deposits while sediments more than 20 feet below surface are assigned a moderate potential for fossils (PFYC 3) due to similar deposits producing fossils at that depth near the Plan Area.

**Table 5.5-1 Paleontological Sensitivity Rankings**

Rock Unit	PFYC Rankings				
	5 Very High	4 High	3 Moderate	2 Low	1 Very Low
Older alluvium, middle to late Pleistocene			More than 20 feet deep	Less than 20 feet deep	
Sources: Cogstone 2020					

Furthermore, based on fossils found in similar sediments nearby, no paleontological monitoring is currently recommended for the mass excavations of development projects accommodated by the Specific Plan. Also, drilling activities, regardless of depth, have a low potential to produce fossils meeting significance criteria because any fossils brought up by the auger during drilling will not have information about formation, depth, or context. The only instance in which such fossils will meet significance criteria is if the fossil is a species new to the region.

However, should excavation exceed a depth of 20 feet below surface, there is the potential to encounter paleontological resources. For example, recommendations from the Geotechnical Investigation include implementation of ground improvement techniques for building construction, such as the installation of aggregate piers. As stated in the Geotechnical Investigation, ground improvements should extend from the ground surface to a minimum depth of 30 feet. Therefore, grading activities at depths of 20 feet or greater have the potential to encounter unknown, buried resources, and impacts are considered potentially significant.

#### 5.5.4 Cumulative Impacts

Geology and soils impacts are site-specific and generally do not combine to result in cumulative impacts. Similar to the Specific Plan, other development projects in the City would be required to comply with applicable state and local building regulations, including the CBC. Site-specific geologic hazards would be addressed in each project's geotechnical investigation. Additionally, other development projects in the City would be subject to the same resource protection requirements as the Specific Plan. Other development projects would also require site specific paleontological analysis that could lead to mitigation requiring monitoring and recovery, identification, and curation of any resources discovered. Therefore, no significant cumulative impact would occur and the Specific Plan's contribution would not be cumulatively considerable.

#### 5.5.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.5-1, 5.5-2, and 5.5-3.



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Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.5-4** Grading activities have the potential to encounter buried paleontological resources at depths below 20 feet.

### 5.5.6 Mitigation Measures

#### Impact 5.5-4

GEO-1 Prior to the issuance of grading permits for excavations of 20 feet or greater, the project applicant for each development or redevelopment project accommodated by the Century Villages at Cabrillo Specific Plan shall retain a qualified paleontologist who meets the Secretary of the Interior's Professional Qualifications Standards to monitor all grading activities. If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily stop construction work within 50 feet of the find in order to assess its significance. Suspension of ground disturbances in the vicinity of the discovery shall not be lifted until the paleontologist has evaluated the discovery. Work may continue in other areas of the Plan Area and for other project elements while the encountered find is evaluated.

If upon examination the resource is determined to be a significant paleontological resource, the qualified paleontologist shall make recommendations on the treatment and disposition of the resource. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) consistent with the guidelines of the Society of Vertebrate Paleontology. The PRIMP shall include the methods that will be used to protect identified paleontological resources, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading. A copy of the final report shall be submitted to the City of Long Beach Development Services Department.

### 5.5.7 Level of Significance After Mitigation

With the implementation of Mitigation Measure GEO-1, potential impacts associated with paleontological resources would be less than significant. Therefore, no significant unavoidable adverse impacts relating to paleontological resources have been identified.

### 5.5.8 References

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### 5.6 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Century Villages at Cabrillo Specific Plan (Specific Plan) to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough to result in a measurable increase in global concentrations of GHG, climate change impacts of a project are considered on a cumulative basis.

This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD). Modeling of GHG emissions was conducted using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Model outputs are in Appendix C of this DEIR.

#### Terminology

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a greenhouse gas absorbs relative to a molecule of carbon dioxide (CO<sub>2</sub>) over a given period of time (20, 100, and 500 years). CO<sub>2</sub> has a GWP of 1.
- **Carbon dioxide-equivalent (CO<sub>2</sub>e).** The standard unit to measure the amount of greenhouse gases in terms of the amount of CO<sub>2</sub> that would cause the same amount of warming. CO<sub>2</sub>e is based on the GWP ratios between the various GHGs relative to CO<sub>2</sub>.
- **MTCO<sub>2</sub>e.** Metric ton of CO<sub>2</sub>e.
- **MMTCO<sub>2</sub>e.** Million metric tons of CO<sub>2</sub>e.

#### 5.6.1 Environmental Setting

##### 5.6.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and ozone (O<sub>3</sub>)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>),

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hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).<sup>1,2</sup> The major GHGs applicable to the Specific Plan are briefly described.

- **Carbon dioxide (CO<sub>2</sub>)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N<sub>2</sub>O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.6-1. The GWP is used to convert GHGs to CO<sub>2</sub>-equivalence (CO<sub>2</sub>e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fifth Assessment Report (AR5), GWP values for CH<sub>4</sub>, 10 MT of CH<sub>4</sub> would be equivalent to 280 MT of CO<sub>2</sub>.

**Table 5.6-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>**

GHGs	Carbon Dioxide (CO <sub>2</sub> )	Methane <sup>1</sup> (CH <sub>4</sub> )	Nitrous Oxide (N <sub>2</sub> O)
<b>Second Assessment</b>			
Atmospheric Lifetime (Years)	50 to 200	12 (±3)	120
Global Warming Potential Relative to CO <sub>2</sub> <sup>2</sup>	1	21	310
<b>Fourth Assessment</b>			
Atmospheric Lifetime (Years)	50 to 200	12	114
Global Warming Potential Relative to CO <sub>2</sub> <sup>2</sup>	1	25	298
<b>Fifth Assessment</b>			
Atmospheric Lifetime (Years)	50 to 200	12	121
Global Warming Potential Relative to CO <sub>2</sub> <sup>2</sup>	1	28	265

Source: IPCC 1995; IPCC 2007; IPCC 2013.

<sup>1</sup> The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO<sub>2</sub> is not included.

<sup>2</sup> Based on 100-year time horizon of the GWP of the air pollutant compared to CO<sub>2</sub>.

- <sup>1</sup> Water vapor (H<sub>2</sub>O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant because it is considered part of the feedback loop rather than a primary cause of change.
- <sup>2</sup> Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

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#### California's GHG Sources and Relative Contribution

In 2019, the statewide GHG emissions inventory was updated for 2000 to 2017 emissions using the GWPs in IPCC's AR4.<sup>3</sup> Based on these GWPs, California produced 424.10 MMTCO<sub>2</sub>e GHG emissions in 2017. California's transportation sector was the single largest generator of GHG emissions, producing 40.1 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.7 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.6 percent) high GWP (4.7 percent), and recycling and waste (2.1 percent) (CARB 2019a).

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine GHG emitting activities statewide were 424 MMTCO<sub>2</sub>e, 5 MMTCO<sub>2</sub>e lower than 2016 levels. This represents an overall decrease of 14 percent since peak levels in 2004 and 7 MMTCO<sub>2</sub>e below the 1990 level and the state's 2020 GHG target. During the 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 MTCO<sub>2</sub>e per capita to 10.7 MTCO<sub>2</sub>e per capita in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 41 percent decline since the 2001 peak, while the state's GDP has grown 52 percent during this period. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (hydro, solar, wind, and nuclear energy) (CARB 2019b).

#### Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO<sub>2</sub> in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by

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<sup>3</sup> Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under AB 32 (2006).

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varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

### Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide, average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). The years from 2014 through 2016 have shown unprecedented temperatures with 2014 being the warmest (OEHHA 2018). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels (CCCC 2012).

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms (CAT 2006). Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, with unprecedented dry years occurring in 2014 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years occurring from 2012 to 2015 (OEHHA 2018). According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 5.6-1), and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 5.6-2, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

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Table 5.6-2 Summary of GHG Emissions Risks to California

Impact Category	Potential Risk
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels
Water Resources Impacts	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: CEC 2006; CEC 2009; CCCC 2012; CNRA 2014.

## 5.6.1.2 MASS EMISSIONS AND HEALTH EFFECTS

On December 24, 2018, in *Sierra Club et al. v. County of Fresno et al.* (Friant Ranch), the California Supreme Court determined that the EIR for the proposed Friant Ranch project failed to adequately analyze the project's air quality impacts on human health. The EIR prepared for the project, a master planned retirement community in Fresno County, showed that project-related mass emissions would exceed the San Joaquin Valley Air Pollution Control District's regional significance thresholds. In its findings, the California Supreme Court affirmed the holding of the Court of Appeal that EIRs for projects must not only identify impacts to human health, but also provide an "analysis of the correlation between the project's emissions and human health impacts" related to each criteria air pollutant that exceeds the regional significance thresholds or explain why it could not make such a connection. In general, the ruling focuses on the correlation of emissions of toxic air contaminants and criteria air pollutants and their impact to human health.

In 2009, the EPA issued an endangerment finding for six GHGs (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) in order to regulate GHG emissions from passenger vehicles. The endangerment finding is based on evidence

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that shows an increase in mortality and morbidity associated with increases in average temperatures, which increase the likelihood of heat waves and elevated ozone levels. The effects of climate change are identified in Table 5.7-2. While effects such as sea level rise and extreme weather can indirectly impact human health, neither the EPA nor CARB has established ambient air quality standards for GHG emissions. The state's GHG reduction strategy outlines a path to avoid the most catastrophic effects of climate change. Yet the state's GHG reduction goals and strategies are based on the state's path toward reducing statewide cumulative GHGs as outlined in AB 32, SB 32, and Executive Order S-03-05. As described further below, the two significance thresholds that the City uses to analyze GHG impacts are based on achieving those statewide GHG reduction goals. Further, because no single project is large enough to result in a measurable increase in global concentration of GHG emissions, climate change impacts of a project are considered on a cumulative basis. Without federal ambient air quality standards for GHG emissions and given the cumulative nature of GHG emissions and the City's significance thresholds that are tied to reducing the state's cumulative GHG emissions, it is not feasible at this time to connect the project's specific GHG emission to the potential health impacts of climate change.

#### 5.6.1.3 REGULATORY BACKGROUND

This section describes the federal, state, and local regulations applicable to GHG emissions.

##### Federal

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 US Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any emission reduction requirements but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and SF<sub>6</sub>—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the Specific Plan's GHG emissions inventory because they constitute the majority of GHG emissions; they are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

##### *US Mandatory Reporting Rule for GHGs (2009)*

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MTCO<sub>2</sub>e or more per year are required to submit an annual report.

##### *Update to Corporate Average Fuel Economy Standards (2021 to 2026)*

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. However, on March 30,



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2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021-2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. However, consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America, and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet the CAFE standards established in 2012 for model years 2017 to 2025 (CARB 2019c).

#### *EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)*

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new, large stationary sources of emissions such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy (ACE) rule which became effective on August 19, 2019. The ACE rule was crafted under the direction of President Trump's Energy Independence Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit CO<sub>2</sub> emissions from coal-fired power plants.

### State

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Orders S-03-05 and B-30-15, Assembly Bill (AB) 32, Senate Bill (SB) 32, and SB 375.

#### *Executive Order S-03-05*

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

#### *Assembly Bill 32, the Global Warming Solutions Act (2006)*

State of California guidance and targets for reductions in GHG emissions are generally embodied in the Global Warming Solutions Act, adopted with passage of AB 32. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 emissions reduction goal established in Executive Order S-03-05.

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#### *CARB 2008 Scoping Plan*

The first Scoping Plan was adopted by CARB on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be 596 MMTCO<sub>2</sub>e in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMTCO<sub>2</sub>e (471 million tons) for the state (CARB 2008). To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MTCO<sub>2</sub>e per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

#### *First Update to the Scoping Plan (2014)*

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 MMTCO<sub>2</sub>e 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, are slightly higher at 431 MMTCO<sub>2</sub>e (CARB 2014).

As identified in the First Update to the Scoping Plan, California is on track to meet the goals of AB 32. The update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goal, including a recommendation for the state to adopt a midterm target. According to the First Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

#### *Executive Order B-30-15*

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent below 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

#### *Senate Bill 32 and Assembly Bill 197*

In September 2016, Governor Brown signed SB 32 and AB 197, making the Executive Order goal for year 2030 into a statewide, mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

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#### *Second Update to the Scoping Plan (2017)*

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO<sub>2</sub>e for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission vehicle technologies; continued investment in renewables such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten emissions limits for criteria air pollutants and toxic air contaminants on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission (ZE) buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency by 25 percent by 2030 and utilizes near-zero emissions technology and deployment of ZE trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to these statewide strategies, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and recommended local actions to reduce GHG emissions—for example, statewide targets of no more than 6 MTCO<sub>2</sub>e or less per capita by 2030 and 2 MTCO<sub>2</sub>e or less per capita by 2050. CARB recommends that local governments

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evaluate and adopt quantitative, locally appropriate goals that align with the statewide per capita targets and sustainable development objectives, and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the state's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population) consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the "business as usual" yardstick—that is, what would the GHG emissions look like if the state did nothing at all beyond the policies that are already required and in place to achieve the 2020 limit, as shown in Table 5.6-3. It includes the existing renewables requirements, advanced clean cars, the "10 percent" LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 MMTCO<sub>2e</sub> above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

**Table 5.6-3 2017 Climate Change Scoping Plan Emissions Reductions Gap**

Modeling Scenario	2030 GHG Emissions MMTCO <sub>2e</sub>
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	260
Gap to 2030 Target	60

Source: CARB 2017b.

Table 5.6-4 provides estimated GHG emissions compared to 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

**Table 5.6-4 2017 Climate Change Scoping Plan Emissions Change by Sector**

Scoping Plan Sector	1990 MMTCO <sub>2e</sub>	2030 Proposed Plan Ranges MMTCO <sub>2e</sub>	% Change from 1990
Agricultural	26	24 to 25	-8% to -4%
Residential and Commercial	44	38 to 40	-14% to -9%
Electric Power	108	30 to 53	-72% to -51%
High GWP	3	8 to 11	267% to 367%
Industrial	98	83 to 90	-15% to -8%

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**Table 5.6-4 2017 Climate Change Scoping Plan Emissions Change by Sector**

Scoping Plan Sector	1990 MMTCO <sub>2e</sub>	2030 Proposed Plan Ranges MMTCO <sub>2e</sub>	% Change from 1990
Recycling and Waste	7	8 to 9	14% to 29%
Transportation (including TCU)	152	103 to 111	-32% to -27%
Net Sink <sup>1</sup>	-7	TBD	TBD
Sub Total	431	294 to 339	-32% to -21%
Cap-and-Trade Program	NA	34 to 79	NA
Total	431	260	-40%

Source: CARB 2017b.

Notes: TCU = Transportation, Communications, and Utilities; TBD = To Be Determined.

<sup>1</sup> Work underway through 2017 was used to estimate the range of potential sequestration benefits from the natural and working lands sector.

### *Senate Bill 375*

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 has been defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 MMTCO<sub>2e</sub> of reductions by 2020 and 15 MMTCO<sub>2e</sub> of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

### *2017 Update to the SB 375 Targets*

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and recently released another update in February 2018. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005. This excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies

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such as statewide road user pricing. The proposed targets call for greater per capita GHG emission reductions from SB 375 than are currently in place, which for 2035, translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted sustainable communities strategies (SCS). As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 MMTCO<sub>2e</sub> in 2035 compared to the current targets. For the next round of SCS updates, CARB's updated targets for the SCAG region are an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018). CARB adopted the updated targets and methodology on March 22, 2018. All SCSs adopted after October 1, 2018, are subject to these new targets.

#### *SCAG's Regional Transportation Plan / Sustainable Communities Strategy*

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan. For the SCAG region, the 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) (Connect SoCal) was adopted on September 3, 2020, and is an update to the 2016-2040 RTP/SCS (SCAG 2020). In general, the RTP/SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land uses strategies in development of the SCAG region through horizon year 2045 (SCAG 2020). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. Additionally, Connect SoCal also forecasts that implementation of the plan will reduce VMT per capita in year 2045 by 4.1 percent compared to baseline conditions for that year. Connect SoCal includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods while expanding mobility choices by locating housing, jobs, and transit closer together, and increasing investments in transit and complete streets (SCAG 2020).

#### *Transportation Sector Specific Regulations*

##### *Assembly Bill 1493*

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

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### ***Executive Order S-01-07***

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO<sub>2</sub>e gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

### ***Executive Order B-16-2012***

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions 80 percent below 1990 levels.

### ***Senate Bill 743***

SB 743 was enacted in 2013, with the intent to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions." When implemented, "traffic congestion shall not be considered a significant impact on the environment" within CEQA transportation analysis. OPR was charged with developing new guidelines for evaluating transportation impacts under CEQA using methods that no longer focus on measuring automobile delay and level of service (LOS). OPR issued updates to the CEQA guidelines in support of these goals and a supporting technical advisory. The updates establish vehicle miles travelled (VMT) as the primary metric for evaluating a project's environmental impacts on the transportation system, replacing LOS standards. The changes to CEQA guidelines Section 15064.3 to implement SB 743 were certified by the State in December of 2018. In July 2020, the City of Long Beach adopted new Traffic Impact Analysis (TIA) Guidelines which identify VMT as the metric for CEQA transportation analysis.

### ***Renewables Portfolio: Carbon Neutrality Regulations***

#### ***Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08***

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitan). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar,

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geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

#### ***Senate Bill 350***

Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

#### ***Senate Bill 100***

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

#### ***Executive Order B-55-18***

Executive Order B-55-18, signed September 10, 2018, sets a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO<sub>2</sub>e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

### *Energy Efficiency Regulations*

#### ***California Building Code: Building Energy Efficiency Standards***

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2019 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated



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thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings are 30 percent more energy efficient compared to the 2016 standards, and single-family homes are 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

#### ***California Building Code: CALGreen***

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.<sup>4</sup> The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2019. The 2019 CALGreen standards became effective January 1, 2020.

#### ***2006 Appliance Efficiency Regulations***

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006 and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

#### ***Solid Waste Diversion Regulations***

##### ***AB 939: Integrated Waste Management Act of 1989***

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

##### ***AB 341***

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

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<sup>4</sup> The green building standards became mandatory in the 2010 edition of the code.

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#### ***AB 1327***

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

#### ***AB 1826***

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

#### ***Water Efficiency Regulations***

#### ***SBX7-7***

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

#### ***AB 1881, Water Conservation in Landscaping Act***

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

#### ***Short-Lived Climate Pollutant Reduction Strategy***

#### ***Senate Bill 1383***

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH<sub>4</sub>. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane

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by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017a). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

### Local

#### *City of Long Beach Sustainable City Action Plan*

The City of Long Beach adopted the Sustainable City Action Plan in February 2010 (Long Beach 2010). The Sustainable City Action Plan is meant to guide the City's future operational and policy decisions and it sets out the environmental and sustainability goals listed below. The Sustainable City Action Plan will be superseded by the City's Climate Action and Adoption Plan (CAAP) once it is adopted, which is expected in Fall of 2021. A description of the CAAP is provided below.

- 100% of major city facilities are LEED certified (or equivalent) by 2020.
- At least 5 million square feet of privately developed LEED certified (or equivalent) green buildings by 2020.
- Double the number of LEED accredited professionals (or equivalent) in the City and community by 2012.
- 100% of city-owned vacant lots are utilized with interim green uses by 2012.
- Create at least 6 new community gardens by 2012.
- Plant at least 10,000 new trees in Long Beach by 2020.
- 100% of suitable alley and parking lot projects use permeable pavement by 2020.
- 50% of Long Beach residents work in Long Beach by 2020.
- At least 60,000 residents in the downtown by 2020.
- By 2020, at least 30% of Long Beach residents use alternative transportation to get to work.
- Reduce greenhouse gas emissions from City facilities and operations by 15% by 2020.
- Reduce electricity use in City operations by 25% by 2020.
- Reduce natural gas use in City operations by 15% by 2020.

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- Facilitate the development of at least 2 Megawatts of solar energy on city facilities by 2020.
- Reduce community electricity use by 15% by 2020.
- Reduce community natural gas use by 10% by 2020.
- Facilitate the development of at least 8 Megawatts of solar energy within the community (private rooftops) by 2020.
- Identify and develop at least 2,000 green collar jobs in Long Beach by 2012.
- Enroll 100 green businesses in the Long Beach Green Business Certification Program by 2012.
- Target half of the business grants/loans for green business development by 2012.
- Increase City green spending to 100% by 2020.
- Annual increase in participation in citywide green events.
- Increase the average fuel efficiency of the gasoline-powered City fleet to 35 mpg by 2020.
- 100% of the City fleet is alternative fuel and/or low emission by 2020.
- Reduce vehicle emissions by 30% by 2020.
- Increase public transit ridership by 25% by 2016.
- Increase city employee average vehicle ridership to 1.5 by 2012.
- 100% of taxi cab fleets are alternative fuel and/or low emissions by 2016.
- Increase bike ridership from 1% to 10% by 2016.
- Create a system of at least 200 miles of interconnected bike routes (Class 1-3) by 2020.
- Reduce future port-related emissions by 47% reduction in DPM, 45% reduction in NO<sub>x</sub>, and 52% reduction in SO<sub>x</sub> from OGV, CHE & HDV source categories by 2011.
- Create 8 acres of open space per 1,000 residents by 2020.
- Create 100 miles of green linkages by 2020.
- Establish one or more Natural Centers along the L.A. River by 2016.
- Establish a native landscape demonstration in every park 1 acre or larger by 2020.
- Establish a community garden in every park 5 acres or larger by 2020.

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- 1,200 front yards converted to native or edible landscape by 2016.
- Train 500 Habitat Stewards by 2016.
- Annual increase of youth who are trained as Long Beach Bioneers.
- Annual reduction in average pounds of solid waste generated per person per day.
- Increase the number of students participating in Traveling Recycling Education Center to 2,000 per year by 2016.
- Attract and retain to total of 20 RMDZ manufacturing companies by 2020.
- Reduce per capita use of potable water, exceeding the State mandate to achieve a demand reduction of 20% in per capita water use by the year 2020.
- Facilitate the installation of rain catchment systems at 5 City facilities by 2012.
- Facilitate the development of 50 green roofs communitywide by 2016.

### *City of Long Beach Climate Action and Adaptation Plan (CAAP)*

The City of Long Beach released its CAAP on December 10, 2020 with adoption anticipated for Fall 2021 (Long Beach 2020). The CAAP is intended to be utilized for purposes of GHG streamlining and to satisfy the requirements needed under CEQA Guidelines Section 15183 to be considered a qualified GHG reduction plan. Overall, the CAAP provides a framework for the City to reduce community-wide GHG emissions and comply with state regulations (e.g., SB 32), and to also address the effects of climate change on the community. Under the CAAP, the City aims to achieve a per service population (SP) emissions target of 3.04 MTCO<sub>2</sub>e per SP for year 2030, which would coincide with the emissions reduction target established under SB 32. To achieve this target, the City would be required to reduce emissions by 192,659 MTCO<sub>2</sub>e relative to the business-as-usual emissions forecast for year 2030. In addition to the year 2030 target, the CAAP also includes a long-term net carbon neutrality goal for year 2045. This goal would require a reduction in GHG of 1,513,047 MTCO<sub>2</sub>e. To meet the 2030 reduction target, the CAAP includes 21 mitigation actions covering the transportation, building energy, and waste sectors. Full implementation of these mitigation actions would reduce emissions in the transportation, building energy, and waste sectors by 8 percent, 68 percent, and 24 percent, respectively. In addition to mitigation actions, the CAAP also includes 40 various adaptation actions that addresses extreme heat, air quality, drought, and sea level rise and flooding.

### *City Green Building Standards for Public and Private Development (Municipal Code Section 21.45.400)*

The City Municipal Code requires that the following types of projects meet Leadership in Energy and Environmental Design (LEED) Green Building standards:

- a. A new residential or mixed use building of 50 dwelling units and 50,000 gross square feet or more;

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- b. A new mixed use, or nonresidential building of 50,000 square feet or more of gross floor area;
- c. The alteration of an existing residential or mixed use building that results in the addition of 50 dwelling units and 50,000 gross square feet or more;
- d. The alteration of an existing mixed use, or nonresidential building that results in the expansion of 50,000 gross square feet or more; and
- e. A new construction or substantial rehabilitation project for which the City provides any portion of funding.

#### *South Coast Air Quality Management District*

South Coast AQMD has adopted a significance threshold of 10,000 MTCO<sub>2</sub>e per year for permitted (stationary) sources of GHG emissions for which South Coast AQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, South Coast AQMD identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010a). This following tiered approach has not been formally adopted by South Coast AQMD.

- **Tier 1.** If a project is exempt from CEQA, project-level and contribution to significant cumulative GHG emissions are less than significant.
- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (e.g., city or county), project-level and contribution to significant cumulative GHG emissions are less than significant.
- **Tier 3.** If GHG emissions are less than the screening-level criterion, project-level and contribution to significant cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, South Coast AQMD requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The South Coast AQMD Working Group identified that because construction activities would result in a “one-time” net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation. South Coast AQMD identified a screening-level threshold of 3,000 MTCO<sub>2</sub>e annually for all land use types. The bright-line screening-level criteria are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds. Therefore, projects that do not exceed the bright-line threshold would have a

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nominal, and therefore, less than cumulatively considerable impact on GHG emissions. South Coast AQMD recommends use of the 3,000 MTCO<sub>2</sub>e interim bright-line screening-level criterion for all project types (South Coast AQMD 2010b).

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.<sup>5</sup>

The South Coast AQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 MTCO<sub>2</sub>e per year per service population (MTCO<sub>2</sub>e/year/SP) for project-level analyses and 6.6 MTCO<sub>2</sub>e/year/SP for plan level projects (e.g., program-level projects such as general plans) for the year 2020.<sup>6</sup> The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.<sup>7</sup>

#### 5.6.1.4 EXISTING CONDITIONS

The various existing land uses within the Plan Area generate GHG emissions from natural gas used for energy, heating, and cooking; electricity usage; vehicle trips for residents, employees, vendors, and customers; and area sources such as landscaping and consumer cleaning products. Emissions associated with the Plan Area are shown in Table 5.6-5.

**Table 5.6-5 Specific Plan Existing GHG Emissions Inventory**

Sectors	GHG Emissions
	MTCO <sub>2</sub> e Per Year
Area	15
Energy	1,814
Transportation	5,925
Solid Waste Disposal	619
Water/Wastewater	311
<b>Plan Area Total All Sectors</b>	<b>8,684</b>

Source: CalEEMod, version 2016.3.2.25.

Notes: Totals may not equal 100 percent due to rounding.

#### 5.6.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

<sup>5</sup> South Coast AQMD had identified an efficiency target for projects that exceed the bright-line threshold: a 2020 efficiency target of 4.8 MTCO<sub>2</sub>e per year per service population (MTCO<sub>2</sub>e/year/SP) for project-level analyses and 6.6 MTCO<sub>2</sub>e/year/SP for plan-level projects (e.g., general plans). Service population is generally defined as the sum of residential and employment population of a project. The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.<sup>5</sup>

<sup>6</sup> It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

<sup>7</sup> South Coast AQMD took the 2020 statewide GHG reduction target for land use only GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

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- GHG-1      Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- GHG-2      Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The California Supreme Court, in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204, recently identified “potential options” for lead agencies in choosing CEQA thresholds of significance under which to analyze GHG impacts. However, the Court emphasized that the following list did not represent a “guarantee,” but instead, “merely a description of potential pathways to compliance, depending on the circumstances of a given project.”

- A project could demonstrate compliance with regulations intended to reduce GHG emissions consistent with AB 32 goals.
- A project could utilize the Business As Usual (BAU) model, which compares a project’s GHG emissions against the emissions associated with continuance of existing uses as a quantitative measure of consistency with AB 32 goals. The Court cautioned that substantial evidence in the record must link the statewide GHG reduction standard to the appropriate GHG reduction standard for the specific location and type of project under consideration.
- A project could implement a local climate action plan or other “Geographically Specific Greenhouse Gas Emission Reduction Plan.”
- A project could demonstrate consistency with the long term climate goals of the applicable regional RTP/SCS adopted pursuant to SB 375.
- A project could analyze its GHG emissions against an appropriate numerical threshold. The Court favorably cited to the GHG significance thresholds of the Bay Area Air Quality Management District, based on compliance with AB 32, which use a “service population” GHG ratio threshold for land use projects and a 10,000 ton annual GHG emission threshold for industrial projects.

The Court also noted that projects, especially those that will be developed over long periods of time, must consider consistency with goals beyond 2020. However, the Court was careful to explain that the 2050 target of EO S-3-05 was not a mandated significance threshold. As explained above and by the court, to achieve these goals, significant cultural shifts and innovations in transportation and energy technology are required, which are neither currently available nor in the jurisdiction and control of local agencies, like the City. Thus, analysis of a given development project’s impacts relative to such long range targets are too speculative for purposes of determining CEQA significance.

### Summary

For purposes of this analysis, because the City has not developed its own numeric GHG significance threshold, the South Coast AQMD Working Group’s bright-line screening-level criterion of 3,000 MTCO<sub>2e</sub> per year is



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used to quantitatively analyze the project's GHG emissions impacts (see Impact 5.6-1 below). If the project's emissions exceed this criterion, GHG emissions would be considered potentially significant in the absence of mitigation measures. This analysis also analyzes the project's GHG emissions based on consistency with the Scoping Plan, SCAG's RTP/SCS, the City's Sustainable City Action Plan, the City's Proposed CAAP, and the City's Municipal Code Section 21.45.400 (see Impact 5.6-2 below). Additionally, Section 5.14, Transportation, Impact 5.14-1, of this Draft EIR, analyzes the project's consistency with the City's General Plan Mobility Element (as summarized below). Should the project conflict with or obstruct the policies, goals or programs contained in these plans, it would be considered potentially significant without implementation of mitigation measures. Therefore, this EIR utilizes several of the compliance options identified by the Supreme Court in the *Newhall* case, and represents the most comprehensive analysis feasible.

### 5.6.3 Environmental Impacts

#### 5.6.3.1 METHODOLOGY

This GHG emissions evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG emissions impacts are likely in conjunction with the type and scale of development associated with the Specific Plan. Air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2.25. CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions) and area sources and indirect emissions from energy use, mobile sources, waste disposal (annual only), and water/wastewater (annual only).

The following provides a summary of the assumptions used for the Specific Plan. GHG emissions modeling datasheets are in Appendix C.

#### Operational Phase

- **Transportation:** Based on the weekday daily trip generation and VMT data provided by Fehr and Peers (see Appendix I of this DEIR). Additionally, the analysis also utilizes the Saturday and Sunday daily trip generation rates as provided in the 10th Edition Trip Generation Manual Handbook (ITE 2017). Year 2020 and 2033 on-road GHG emissions are based on calendar year 2020 and 2033 emission rates, respectively, obtained from EMFAC2017 (v. 1.0.2) and adjusted based on CalEEMod methodology.
- **Area Sources.** Area source emissions from use of consumer cleaning products and landscaping equipment are based on CalEEMod default values and the square footage of the proposed buildings and parking areas. Additionally, existing and proposed dwelling units are modeled without fireplaces.
- **Energy:** GHG emissions from energy use (i.e., natural gas and electricity) are based on the CalEEMod default natural gas and electricity usage rates. The CalEEMod historical energy rates, which are based on the 2005 Building Energy Efficiency Standards, are utilized for the existing buildings. New buildings are assumed to comply with the 2019 Building Energy Efficiency Standards and are modeled to be 10.2 percent and 1 percent more energy efficient for electricity and natural gas, respectively, compared to the 2016 Building Energy Efficiency Standards (NORESCO 2018). Under the California Building and Energy Standards, residential buildings that are four stories and higher fall under the non-residential standards. The

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carbon intensity of electricity supplied by Southern California Edison is based on their latest Sustainability Report (SCE 2020). For year 2033, the SCE carbon intensity is adjusted to account for the SB 100 RPS target of 60 percent by year 2030.

- **Solid Waste Disposal:** Indirect emissions from waste generation are based on CalRecycle waste generation rates of 4 pounds per dwelling per day for residential uses and 0.06 pound per square foot per day for non-residential uses.<sup>8</sup>
- **Water/Wastewater:** Emissions from this sector are based on the water demand rate of 0.26 acre-feet per year (AFY) per dwelling unit and 0.00052 AFY per square feet for non-residential uses.<sup>9</sup> Emissions of GHG are associated with the embodied energy used to supply, treat, and distribute water. For purposes of this analysis, water demand is modeled as 100 percent indoor water.

### Construction Phase

For purposes of this analysis, development of the Specific Plan is anticipated to occur over a 10-year period beginning in year 2023 and would generally occur over 12 development phases. Each of the 12 development phases are anticipated to last in duration of approximately 20 months (see Table 5.2-10, *Specific Plan Development Phase Schedule*). In general, each development phase would consist of demolition of some of the existing hardscape and buildings, site preparation, grading, utility trenching, geopiering, building construction, coating, and paving (see Table 5.2-9, *Construction Activities, Phasing, and Equipment*). Due to the programmatic nature of the Specific Plan, construction emissions are quantified for a single development phase that represents the worst-case scenario for an individual development phase. The total construction emissions for the Specific Plan are based on the emissions associated with this worst-case development phase multiplied by the total number of development phases (12). Additionally, because construction emissions are one-time emissions, construction emissions are amortized over a 30-year building lifetime in accordance with the South Coast AQMD Working Group recommendations (South Coast AQMD 2009).

Life-cycle emissions are not included in this analysis because not enough information is available for the Specific Plan, and therefore life-cycle GHG emissions would be speculative.<sup>10</sup> Black carbon emissions are not included in the GHG analysis because CARB does not include this short-lived climate pollutant in the state's Scoping Plan inventory but treats it separately.<sup>11</sup> GHG modeling is included in Appendix C of this Draft EIR.

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<sup>8</sup> See Table 5.16-5, *Estimated Solid Waste Generation*, of this DEIR.

<sup>9</sup> See Table 5.16-2, *Water Demand Estimate for the Specific Plan*, in this DEIR.

<sup>10</sup> Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the Specific Plan is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

<sup>11</sup> Particulate matter emissions, which include black carbon, are analyzed in Section 5.2, *Air Quality*. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017a).

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#### 5.6.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

**Impact 5.6-1: Buildout of the Specific Plan could generate a net increase in GHG emissions, either directly or indirectly, that may have a significant impact on the environment [Threshold GHG-1])**

**Impact Analysis:** Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is by definition a cumulative environmental impact. As stated, for purposes of this analysis, the potential GHG emissions impact from implementation of the Specific Plan is based on consistency with applicable plans to reduce GHG emissions and on comparison of the emissions inventory of the project to the South Coast AQMD 3,000 MTCO<sub>2</sub>e per year bright-line screening-level threshold.

Plans that reduce GHG emissions applicable to the Specific Plan include the CARB Scoping Plan, SCAG's Connect SoCal RTP/SCS, and the City's CAAP in addition to the City's Sustainable City Action Plan. The City also adopted green building standards for public and private development under Municipal Code Section 21.45.400. As discussed in detail below in Impact 5.6-2, the Specific Plan would be consistent with these aforementioned applicable plans and regulations. For example, future development projects accommodated under the Specific Plan would comply with CALGreen and the Building Energy Efficiency Standards, which would result in increased energy efficiency and conservation. Furthermore, the development standards and design guidelines included in the Specific Plan are based on the gold LEED-Neighborhood Development (ND) certification documentation obtained by Century Village at Cabrillo in 2019. Additionally, the implementation of the Specific Plan would result in a decrease in VMT per vehicle trip compared to existing conditions.

In addition to consistency of the Specific Plan to the applicable plans and regulations, annual GHG emissions were calculated for construction and operation of the Specific Plan and are shown in Table 5.6-6. Construction emissions were amortized into the operational phase in accordance with South Coast AQMD's proposed methodology.

**Table 5.6-6 Specific Plan GHG Emissions**

Sectors	GHG Emissions (MTCO <sub>2</sub> e per Year)			
	Existing	Specific Plan	Percent by Sector Specific Plan	Change from Existing
Area	15	24	<1%	9
Energy <sup>1,2</sup>	1,814	2,459	20%	645
Mobile <sup>3,4</sup>	5,925	7,447	62%	1,522
Water/Wastewater	619	1,521	13%	902
Solid Waste Disposal	311	332	3%	21

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**Table 5.6-6 Specific Plan GHG Emissions**

Sectors	GHG Emissions (MTCO <sub>2</sub> e per Year)			
	Existing	Specific Plan	Percent by Sector Specific Plan	Change from Existing
30-Year Amortized Construction <sup>5</sup>	N/A	233	2%	233
Total All Sectors	8,684	12,016	100%	3,332
South Coast AQMD Bright-Line Threshold				3,000
Exceeds Threshold?				Yes

Source: CalEEMod, Version 2016.3.2.25.

Notes: Emissions may not total to 100 percent due to rounding. N/A: not applicable.

<sup>1</sup> The CalEEMod historical energy rates, which are based on the 2005 Building Energy Efficiency Standards, are utilized for the existing and remaining existing uses.

<sup>2</sup> New buildings are assumed to comply with the 2019 Building Energy Efficiency Standards and are modeled to be 10.2 percent and 1 percent more energy efficient for electricity and natural gas, respectively, compared to the 2016 Building Energy Efficiency Standards.

<sup>3</sup> Based on calendar year 2020 emission rates obtained from EMFAC2017, Version 1.0.2., and adjusted based on CalEEMod methodology for vehicle emission rates.

<sup>4</sup> Based on calendar year 2033 emission rates obtained from EMFAC2017, Version 1.0.2., and adjusted based on CalEEMod methodology for vehicle emission rates.

<sup>5</sup> Construction emissions are amortized based on a typical 30-year building lifetime (South Coast AQMD 2009).

As shown in the table, implementation of the Specific Plan would generate 12,016 MTCO<sub>2</sub>e per year. The primary source of project-related emissions would be mobile sources. The next largest source of emissions would be energy usage. Overall, development of the Specific Plan would result in a net increase in GHG emissions of 3,332 MTCO<sub>2</sub>e per year when compared to the existing conditions, which would exceed the bright-line threshold of 3,000 MTCO<sub>2</sub>e per year. Overall, the Specific Plan would be consistent with applicable plans and regulations to reduce GHG emissions. However, because it would generate GHG emissions that exceed the 3,000 MTCO<sub>2</sub>e per year bright-line, GHG emissions generated by the Specific Plan would be considered to cumulatively contribute to statewide GHG emissions. Therefore, GHG emissions impacts are considered to be potentially significant.

**Level of Significance Before Mitigation:** Potentially Significant.

**Impact 5.6-2: Build out of the Specific Plan would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases [Threshold GHG-2]**

**Impact Analysis:** Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan, SCAG's 2016-2040 RTP/SCS, the City's Sustainable City Action Plan and CAAP, and Municipal Code Section 21.45.400. A consistency analysis with these plans is presented below. Section 5.14, Transportation, Impact 5.14-1, of this Draft EIR, analyzes the project's consistency with the City's General Plan Mobility Element (as summarized below).

### CARB Scoping Plan

The CARB Scoping Plan is applicable to state agencies, but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require the City to adopt policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that affect a local jurisdiction's emissions inventory from the top down. Statewide strategies

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to reduce GHG emissions include the LCFS and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars program).

Development projects accommodated under the Specific Plan are required to adhere to the programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32. These future individual development projects would comply with these statewide GHG emissions reduction measures. For example, new buildings under the Specific Plan would meet the current CALGreen and Building Energy Efficiency standards. The CEC anticipates that new nonresidential buildings will be required to achieve zero net energy by 2030. Project GHG emissions shown in Table 5.6-6 include reductions associated with statewide strategies that have been adopted since AB 32. Therefore, the Specific Plan would generate GHG emissions consistent with the reduction goals of AB 32, and impacts are considered less than significant.

### SCAG's Regional Transportation Plan/Sustainable Communities Strategy

Connect SoCal finds that land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options would be consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in Connect SoCal is to plan for the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2020). Connect SoCal's transportation projects help more efficiently distribute population, housing, and employment growth, and forecast development is generally consistent with regional-level general plan data to promote active transportation and reduce GHG emissions. The projected regional development, when integrated with the proposed regional transportation network in Connect SoCal, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region.

The RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the RTP/SCS, but provides incentives for consistency to governments and developers. The Specific Plan would result in a net increase in retail, commercial, and educational space and 515 housing units, which would increase population and employment opportunities. As discussed in Impact 5.11-1 of this DEIR, the overall jobs-housing ratio for the City without the Specific Plan is projected at 0.96 jobs per housing unit for buildout year 2033. While this ratio is below the recommended range of 1.5 to 1.7, the City would trend towards reaching the recommended range as the existing jobs-housing ratio is 0.91 for the City as a whole. In general, an improved jobs-housing balance for the City overall could contribute in reducing the average distance traveled between where people live and work and therefore reduce passenger VMT. As determined in Impact 5.11-1, implementation of the Specific Plan would not cause a deviation from the projected 0.96 jobs-housing ratio. Furthermore, as shown in Table 5.6-7, while implementation of the Specific Plan would result in an increase in daily VMT and vehicle trips, VMT per vehicle trip would decrease compared to existing conditions. Moreover, as discussed in Impact 5.9-1 and Table 5.9-1, *Consistency with SCAG's 2016-2040 RTP/SCS Goals*, and Table 5.9-2, *Consistency with SCAG's Connect SoCal*, of this DEIR, the Specific Plan is shown to be consistent with the

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RTP/SCS. Therefore, the Specific Plan would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS, and impacts are considered less than significant.

**Table 5.6-7 Specific Plan Operation-Related VMT**

Scenario	Daily VMT	Daily Vehicle Trips	VMT/Vehicle Trip
Existing	44,876	3,189	14.07
Existing Plus Project	74,372	6,332	11.75
Change from Existing	29,496	3,143	-2.32

Source: Fehr & Peers 2020.

Note: Project-generated VMT is VMT associated with trips that start or end in the Plan Area. This methodology excludes pass-through trips not associated with land uses within the Specific Plan and includes the full trip length for the trips that start or end in the Plan Area.

### City of Long Beach Climate Action and Adaptation Plan

As stated, the Proposed CAAP was recently released on December 10, 2020, and is anticipated to be adopted Fall 2021. Table 5.6-8 evaluates consistency of the Specific Plan to the Proposed CAAP. Specifically, the Specific Plan is compared to the adaptation actions and mitigation actions included in the Proposed CAAP. As shown in the table, the Specific Plan would be generally consistent with the applicable adaptation and mitigation actions. For example, the Specific Plan would provide improvements to the bicycle and pedestrian infrastructure through the proposed Wellness Trail in addition to design guidelines that focus on improving the experience and access for pedestrians. In addition, the Specific Plan would focus development around the existing CVC Transit Center, which would serve as the central transportation hub for the Plan Area. These components would support and be consistent with Mitigation Actions T-2 and T-3. Furthermore, the Specific Plan includes minimum parking requirements for the installation of electric vehicle charging stations, which is consistent with Mitigation Action T-5. Moreover, the Specific Plan would include the planting of trees of the evergreen varieties that establish an expansive canopy of shade and also incorporate bioswales and rain gardens to provide green infrastructure. These components would be consistent with Adaptation Actions EH-2, EH-3, and DRT-3. Therefore, implementation of the Specific Plan would not be inconsistent or interfere with implementation of the City's Proposed CAAP and impacts are considered less than significant.

**Table 5.6-8 Consistency with the City of Long Beach Proposed Climate Action and Adaptation Plan**

Action	Project Compliance with Action
Mitigation Actions	
Transportation	
T-1: Increase the frequency, connectivity, and safety of transit options.	<b>Consistent:</b> The Specific Plan proposes development that would utilize the existing CVC Transit Center, which would serve as the transportation node for the Plan Area. Additionally, the current transit access provided to Plan Area residents will be expanded through a vanpool program that connects residents to specific destinations offsite, including grocery stores, medical centers, or community events. This will be accomplished in collaboration with Long Beach Transit, service providers, and local retailers. Furthermore, a network of wellness trails would be established throughout the Plan Area to encourage walking, jogging, and biking and could provide better connectivity to services and amenities such as the CVC Transit Center.
T-2: Expand and improve pedestrian infrastructure citywide.	<b>Consistent:</b> The Specific Plan includes a network of Wellness Trails, which would provide improve the pedestrian infrastructure of the Plan Area. Additionally, the streets along the

## 5. Environmental Analysis GREENHOUSE GAS EMISSIONS

**Table 5.6-8 Consistency with the City of Long Beach Proposed Climate Action and Adaptation Plan**

Action	Project Compliance with Action
<b>Mitigation Actions</b>	
	wellness trails would be redesigned to ease pedestrian crossings and calm vehicle traffic speeds. Furthermore, walkways would be designed to be between 7 to 10 feet in width and where possible, the most direct routes would be provided for pedestrians to access their residence, services, and community amenities.
T-3: Increase bikeway infrastructure.	<b>Consistent:</b> The Specific Plan includes the Wellness Trail, which is a multi-use paved trails that would provide a two-way bike path. Bicycle parking facilities would also be provided under the Specific Plan.
T-4: Implement the Port of Long Beach Clean Trucks Program.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
T-5: Develop an Electric Vehicle Infrastructure Master Plan.	<b>Consistent:</b> New developments in the Plan Area would be required to provide electric vehicle charging facilities. At minimum, at least three percent of total parking spaces, but not less than one stall, shall be capable of supporting electric vehicle supply equipment with pre-wired electricity service.
T-6: Increase employment and residential development along primary transit corridors.	<b>Consistent:</b> The Plan Area is within both transit priority area and high quality transit area (see Section 5.9.1.1, Regulatory Background, of this DEIR). Implementation of the Specific Plan would result in a net increase of 515 dwelling units, which includes affordable units, and would also provide up to 154 new jobs.
T-7: Update the Transportation Demand Management Ordinance.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
T-8: Increase density and mixing of land uses.	<b>Consistent:</b> Implementation of the Specific Plan would result in a net increase of 515 dwelling units within the Plan Area, in addition to a net increase in retail, commercial, and educational space.
T-9: Integrate SB 743 planning with CAAP process.	<b>Not Applicable:</b> This is not a project-specific goal because it assesses how using the SB 743 analysis affects the CAAP's ability to meet GHG reduction targets. However, the project is consistent with SB 743, as demonstrated in Section 5.14, Transportation, Impact 5.14-1.
<b>Energy</b>	
BE-1: Provide access to renewably generated electricity.	<b>Consistent:</b> Street lights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians and vehicles. As described above, new developments in the Plan Area would be required to provide electric vehicle charging facilities.
BE-2: Increase use of solar power.	<b>Consistent:</b> Street lights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians and vehicles.
BE-3: Promote community and solar microgrids.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
BE-4: Develop a residential and commercial energy assessment and benchmarking program.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
BE-5: Provide access to energy efficiency financing, rebates, and incentives for building owners.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
BE-6: Perform municipal energy audits.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
BE-7: Update building codes to incentivize electric new residential and commercial buildings.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
BE-8: Implement short-term measures to reduce emissions related to oil and gas extraction.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>Waste</b>	

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### GREENHOUSE GAS EMISSIONS

**Table 5.6-8 Consistency with the City of Long Beach Proposed Climate Action and Adaptation Plan**

Action	Project Compliance with Action
<b>Mitigation Actions</b>	
<b>W-1:</b> Ensure compliance with state law requirements for multi-family and commercial property recycling programs.	<b>Not Applicable:</b> This relates to City government action and is not a project-specific goal. However, the project would comply with all state law recycling requirements as described in Section 5.16, Utilities and Service Systems, of this Draft EIR.
<b>W-2:</b> Develop an organic waste collection program for City-serviced accounts.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>W-3:</b> Partner with private waste haulers to expand organic waste collection community-wide.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>W-4:</b> Identify organic waste management options.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>Adaptation Actions</b>	
<b>Extreme Heat</b>	
<b>EH-1:</b> Increase presence of cool roofs and cool walls.	<b>Inconsistent:</b> The Specific Plan would not incorporate cool roof/wall systems.
<b>EH-2:</b> Increase the presence of reflective streets, cool surfaces, and shade canopies.	<b>Consistent:</b> The Specific Plan includes a proposed street tree plan that would consist of planting trees of the evergreen varieties that have large canopies to provide as much shade as possible.
<b>EH-3:</b> Enhance and expand urban forest cover and vegetation.	<b>Consistent:</b> The Specific Plan includes a proposed street tree plan that would consist of planting trees of the evergreen varieties that have large canopies to provide as much shade as possible. Additional existing trees shall either be preserved when possible, or replaced at a two to one ratio.
<b>EH-4:</b> Install additional water fountains and other actions to increase public access to water.	<b>Consistent:</b> The Open Space Design Guidelines of the Specific Plan include a provision for drinking fountains to be incorporated into the streetscape and community open space.
<b>EH-5:</b> Identify future vulnerability potential for power outages related to extreme heat and develop plans to prevent such outages.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>EH-6:</b> Enhance and expand the accessibility of cooling centers.	<b>Consistent:</b> Due to the nature of the CVC of providing transitional and permanent housing to the homeless and those at risk of becoming homeless, expansion of facilities under the Specific Plan would potentially provide additional facilities to be used as cooling centers for members of the public that may need them.
<b>EH-7:</b> Provide bus shelter amenities.	<b>Consistent:</b> The existing CVC transit center within the Plan Area serves as the terminus for two Long Beach Transit bus routes that will now extend onto community, reaching the Veterans Hospital, Long Beach State University and regional shopping centers. The transit center includes benches, a bus stop shelter, bike lockers, bollards, public art, and landscaping. The proposed project would retain this feature in its design and allow for its expansion. For example, two additional Long Beach Transit bus routes currently ending at Willow Street and Santa Fe Avenue could eventually be extended to this transit node.
<b>EH-8:</b> Improve beach and coastal transit access during extreme heat events.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>Air Quality</b>	
<b>AQ-1:</b> Incentivize installation of photocatalytic tiles.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>AQ-2:</b> Encourage urban agriculture practices that reduce air quality pollution.	<b>Consistent:</b> Community gardens are a permitted use under the Specific Plan.
<b>AQ-3:</b> Support the development of the Long Beach Airport Sustainability Plan.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.



## 5. Environmental Analysis GREENHOUSE GAS EMISSIONS

**Table 5.6-8 Consistency with the City of Long Beach Proposed Climate Action and Adaptation Plan**

Action	Project Compliance with Action
<b>Mitigation Actions</b>	
<b>AQ-4:</b> Electrify small local emitters, such as lawn and garden equipment, outdoor power equipment, and others.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>AQ-5:</b> Work with Long Beach Unified School District (LBUSD) to support school bus electrification.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>AQ-6:</b> Implement the Port of Long Beach Clean Air Action Plan.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>AQ-7:</b> Increase monitoring and regulation of oil extraction and refining process.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>Drought</b>	
<b>DRT-1:</b> Continue development and implementation of water use efficiency programs and implement additional water conservation programs.	<b>Consistent:</b> The Specific Plan development will include all State mandated water saving features, including water-efficient faucets, showerheads, and toilets. Additionally, as demonstrated in Section 5.16, Utilities and Service Systems, of this Draft EIR, the project could be adequately served by the City's water supply.
<b>DRT-2:</b> Enhance outreach and education related to water conservation.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>DRT-3:</b> Expand usage of green infrastructure and green streets.	<b>Consistent:</b> The Specific Plan would incorporate bioswales and rain gardens along with other permeable surfaces including parkways and decomposed granite.
<b>DRT-4:</b> Expand usage of recycled water and greywater for non-potable use.	<b>Inconsistent:</b> The Specific Plan would not incorporate greywater systems.
<b>DRT-5:</b> Incorporate increased rainfall capture and other actions to maximize local water supplies and offset imported water.	<b>Inconsistent:</b> The Specific Plan would not incorporate greywater systems.
<b>Sea Level Rise + Flooding</b>	
<b>FLD-1:</b> Update and augment floodplain regulations as necessary.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-2:</b> Incorporate sea level rise language into citywide plans, policies, and regulations.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-3:</b> Establish a flood impacts monitoring program.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-4:</b> Incorporate adaptation into City lease negotiations.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-5:</b> Update the City's existing Stormwater Management Plan.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-6:</b> Conduct citywide beach stabilization study.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-7:</b> Review and conduct studies of combined riverine/coastal flooding and increased severity of rainfall events on watershed flooding.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-8:</b> Enhance dunes.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-9:</b> Inventory and flood-proof vulnerable sewer pump stations.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-10:</b> Relocate/elevate critical infrastructure.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
<b>FLD-11:</b> Elevate riverine levees.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.

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### GREENHOUSE GAS EMISSIONS

**Table 5.6-8 Consistency with the City of Long Beach Proposed Climate Action and Adaptation Plan**

Action	Project Compliance with Action
Mitigation Actions	
FLD-12: Expand beach nourishment.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
FLD-13: Construct living shoreline/berm.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
FLD-14: Elevate street hardscapes.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
FLD-15: Elevate streets/pathways.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
FLD-16: Retrofit/extend sea wall.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
FLD-17: Retreat/realign parking lots.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
FLD-18: Extend/upgrade existing sea walls.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
FLD-19: Investigate feasibility of managed retreat.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
FLD-20: Evaluate feasibility of storm surge barrier at Alamitos Bay.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.

Source: City of Long Beach Proposed Climate Action and Adaptation Plan (2020).

### City of Long Beach Sustainable City Action Plan

The Sustainable City Action Plan goals generally focus on increasing building energy efficiency, increasing use of renewable energy, water conservation, increasing public and active transit ridership, and reducing VMT. It is largely focused on guiding City operational and policy decisions rather than project specific actions. As highlighted in Table 5.6-8, the Specific Plan would focus development around the existing CVC Transit Center, which would serve as the central transportation hub for the Plan Area. Additionally, the Specific Plan would also provide bicycle and pedestrian infrastructure improvements (e.g., the wellness trails) and includes design guidelines focused on creating a more conducive environment for both bicycle and pedestrian travel. The planned improvements to the bicycle and pedestrian network would provide better access to the CVC Transit Center and areas outside of the Plan Area, which would contribute in reducing VMT by increasing active transit and public transit use.

In addition to transit related improvements, the development standards and design guidelines included in the Specific Plan are based on the LEED-ND certification documentation obtained by CVC in 2019. The Specific Plan design guidelines require proposed developments to have landscapes that include California native or adaptive plants, which would contribute in conserving water. Furthermore, developments accommodated under the Specific Plan would be required to install low-flow water fixtures. As for energy, at minimum, the new buildings accommodated under the Specific Plan would be built to comply with the 2019 Building Energy Efficiency Standards and CALGreen standards. Compliance with these two building design standards would contribute in increasing the energy efficiency of the proposed uses. Additionally, under the Specific Plan, street lights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians. Overall, the Specific Plan would generally be consistent with the goals of the Sustainable City Action Plan and impacts are considered less than significant.

## 5. Environmental Analysis GREENHOUSE GAS EMISSIONS

### City of Long Beach General Plan, Mobility Element

A detailed consistency analysis of the Specific Plan to the City of Long Beach General Plan Mobility Element is provided in the Impact 5.14-1 discussion of this DEIR. As discussed, the Specific Plan would, overall, support and be consistent with the City of Long Beach General Plan Mobility Element. For example, the Specific Plan includes the development of a multi-modal transportation system, which would encourage active forms of transportation and public transit while providing adequate accommodations for vehicles. This supports the Mobility Element's goal of establishing an efficient, balanced, multi-modal transportation network.

In addition, the Specific Plan includes a Transportation Demand Management (TDM) program that would promote alternative and shared modes of transportation and reduce dependence on vehicles. For example, employers within the Plan Area will be encouraged to arrange flexible work programs in order to mitigate traffic during peak rush hours, as well as reduce parking demand. The Specific Plan will also offer transportation in case of emergency situations for these commuters via the Guaranteed Ride Home program, in collaboration with Metro. Transit passes will be provided free or at reduced-price to residents and employees. The Specific Plan would provide carpool/shared-use vehicle parking for each non-residential and mixed-use building on site. Thus, with the inclusion of these TDM programs, the Specific Plan would support Policy 5-2 of the Mobility Element: "Reduce vehicle miles traveled (VMT) and vehicle trips through the use of alternative modes of transportation and TDM." Therefore, as determined in Impact 5.14-1 of the DEIR, the Specific Plan would be consistent with the City's General Plan Mobility Element and impacts are considered less than significant.

### City of Long Beach Green Building Standards for Public and Private Development (Municipal Code Section 21.45.400)

As stated, the City of Long Beach established green building standards requirements under Municipal Code Section 21.45.400, which are based on the LEED Green Building Rating System. Overall, development projects accommodated under the Specific Plan would be subject to all applicable provisions under Municipal Code Section 21.45.400. Moreover, in addition to being subjected to the requirements of Municipal Code Section 21.45.400, the development standards and design guidelines included in the Specific Plan are based on the gold LEED-Neighborhood Development certification documentation obtained by Century Village at Cabrillo in 2019. Therefore, overall, the Specific Plan would be consistent and would not conflict with the City's Municipal Code Section 21.45.400 and impacts would be less than significant.

### 5.6.4 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, Impact 5.6-1 is not project-specific impacts, but the Specific Plan's contribution to a cumulative impact. Implementation of the Specific Plan would result in annual emissions that would exceed South Coast AQMD's bright-line threshold. Additionally, buildout of the Specific Plan would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, project-related GHG emissions and their contribution to global climate change are cumulatively considerable, and GHG emissions impacts would be significant.

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### GREENHOUSE GAS EMISSIONS

#### 5.6.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.6-2.

Without mitigation, this impact would be **potentially significant**:

- **Impact 5.6-1** Although, the Specific Plan would be consistent with plans and regulations intended to reduce GHG emissions, it would generate GHG emissions that would exceed the South Coast AQMD unadopted bright-line threshold, and thus, build out of the Specific Plan could generate a net increase in greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

#### 5.6.6 Mitigation Measures

##### Impact 5.6-1

GHG-1 New development within the Century Village at Cabrillo Specific Plan shall either 1) be certified LEED Silver Level at minimum, or equivalent program; or 2) implement the following, voluntary provisions of the California Green Building Standards Code (CALGreen). The project applicant/developer(s) shall provide documentation (e.g., building plans) of implementation of the applicable voluntary measures to the City of Long Beach Building & Safety Bureau Official or his/her designee prior to the issuance of building permits.

For nonresidential land uses and residential land uses, the applicant/developer shall:

- Design and build structures to, at a minimum, meet the Tier 2 advanced energy efficiency requirements of the Nonresidential Voluntary Measures of the California Green Building Standards Code, Division A5.2, Energy Efficiency, as outlined under Section A5.203.1.2.2.
- Design the proposed parking areas to provide parking for low-emitting, fuel-efficient, and carpool/van vehicles. At minimum, the number of preferential parking spaces shall equal the Tier 2 Nonresidential Voluntary Measures of the California Green Building Standards Code, Section A5.106.5.1.2.
- Design the proposed parking areas to provide electric vehicle (EV) charging stations. At minimum, the number of EV charging stations shall equal the Tier 2 Nonresidential Voluntary Measures of the California Green Building Standards Code, Section A5.106.5.3.2.

GHG-2 For residential projects, all major appliances (e.g., dishwashers, refrigerators, clothes washers and dryers, and water heaters) provided/installed shall be Energy Star certified or of equivalent energy efficiency where applicable. Prior to the issuance of the certificate of occupancy, the City of Long Beach shall verify implementation of this requirement.

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### GREENHOUSE GAS EMISSIONS

#### 5.6.7 Level of Significance After Mitigation

##### Impact 5.6-1

GHG emissions generated by the Specific Plan would be considered to cumulatively contribute to statewide GHG emissions. Implementation of Mitigation Measures GHG-1 and GHG-2 would reduce GHG emissions to the extent feasible. The Specific Plan includes transportation demand management (TDM) measures to further reduce parking demand and VMT, such as employee flexible work programs, subsidized transit passes, and carpool/carshare programs. However, because the number of people who may use alternative modes of transportation is uncertain, the total reductions cannot be quantified. The lead agency (City of Long Beach) cannot substantively or materially affect reductions in project mobile-source emissions beyond the regulatory requirements. Further, significant cultural shifts and technological innovation is required to achieve the state's long-term GHG emissions goals. The City has no jurisdictional control or responsibility for GHG reductions in other parts of California, the nation or the globe, all of which contribute to climate change. In addition, the City does not have jurisdiction to enforce statewide implementation of all of the applicable GHG-reducing regulatory programs. Although other agencies with the necessary jurisdiction are currently taking action to reduce GHG emissions, the City cannot assure that these measures would ultimately be implemented or be adequate to address climate change. In light of these considerations, as well as the global nature climate change, the Specific Plan's incremental contribution to the global GHG emissions inventory would be considered cumulatively considerable and this cumulative impact is significant and unavoidable, even though the project satisfies several compliance options identified by the *Newhall* court. Impact 5.6-1 would remain **significant and unavoidable**.

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## 5. Environmental Analysis

### GREENHOUSE GAS EMISSIONS

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## 5. Environmental Analysis

### 5.7 HAZARDS AND HAZARDOUS MATERIALS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts of the Villages at Cabrillo Specific Plan (Specific Plan) on human health and the environment due to exposure to hazardous materials or conditions associated with the area covered by the Villages at Cabrillo Specific Plan (Plan Area), as well as with the construction and operational phases of the Specific Plan. The analysis in this section is based in part on the following source:

- *Phase I Environmental Site Assessment Century Villages at Cabrillo Specific Plan*, PlaceWorks, May 2020

A complete copy of this technical report is included Appendix F of this DEIR.

#### 5.7.1 Environmental Setting

##### 5.7.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to hazards and hazardous materials that are applicable to the Specific Plan are summarized below.

#### Federal

##### *Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC. § 6901 et seq.) is the principal federal law that regulates the generation, management, and transportation of waste. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste. The RCRA gave the US Environmental Protection Agency (EPA) the authority to control hazardous waste from “cradle to grave,” that is, from generation to transportation, treatment, storage, and disposal, at active and future facilities. It does not address abandoned or historical sites. The RCRA also set forth a framework for managing nonhazardous wastes. Later amendments required phasing out land disposal of hazardous waste and added underground tanks storing petroleum and other hazardous substances.

##### *Comprehensive Environmental Response, Compensation and Liability Act*

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) protects water, air, and soil resources from the risks created by past chemical disposal practices. This law is also called the Superfund Act and regulates sites on the National Priority List (NPL), which are called Superfund sites.

##### *Emergency Planning and Community Right-to-Know Act*

Title III of the Superfund Amendments and Reauthorization Act (SARA) authorized the Emergency Planning and Community Right-to-Know Act (EPCRA; 42 USC § 11001 et seq.) inform communities and citizens of chemical hazards in their areas by requiring businesses to report the locations and quantities of chemicals stored onsite to state and local agencies; releases to the environment of more than 600 designated toxic chemicals; offsite transfers of waste; and pollution prevention measures and activities and to participate

## 5. Environmental Analysis

### HAZARDS AND HAZARDOUS MATERIALS

in chemical recycling. EPA maintains and publishes an online, publicly available, national database of toxic chemical releases and other waste management activities by certain industry groups and federal facilities—the Toxics Release Inventory.

To implement EPCRA, each state appointed a state emergency response commission to coordinate planning and implementation activities associated with hazardous materials. The commissions divided their states into emergency planning districts and named a local emergency planning committee for each district. The federal EPCRA program is implemented and administered in California Governor's Office of Emergency Services (Cal OES), a state commission, 6 local committees, and 81 Certified Unified Program agencies (CUPAs). Cal OES coordinates and provides staff support for the commission and local committees.

#### *Toxic Substances Control Act*

The Toxic Substances Control Act (TSCA) of 1976 provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls, asbestos, radon, and lead-based paint. Title IV of the TSCA directs EPA to regulate lead-based paint hazards.

TSCA's sections 402/404 requires that those engaged in lead abatements, risk assessments and inspections in homes or child-occupied facilities (such as day care centers and kindergartens) built prior to 1978 be trained and certified in specific practices to ensure accuracy and safety. TSCA Section 403, Residential Hazard Standards for Lead in Paint, Dust and Soil, sets standards for dangerous levels of lead in paint, household dust, and residential soil.

#### *Hazardous Materials Transportation Act*

The United States Department of Transportation (DOT) regulates hazardous materials transportation under Title 49 (Transportation) of the Code of Federal Regulations (CFR). State agencies that have primary responsibility for enforcing Federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. These agencies also govern permitting for hazardous materials transportation. CFR Title 49 reflects laws passed by Congress as of January 2, 2006.

### State

#### *California Health and Safety Code and Code of Regulations*

California Health and Safety Code Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory) and California Code of Regulations, Title 19, Section 2729 set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on site. A business that uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

## 5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

### *California Code of Regulations, Title 22, Division 4.5*

Title 22, Division 4.5, of the California Code of Regulations (CCR) sets forth the requirements for hazardous-waste generators; transporters; and owners or operators of treatment, storage, or disposal facilities. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste. These regulations specify the requirements for transporting shipments of hazardous waste, including manifesting, vehicle registration, and emergency accidental discharges during transportation.

### *Asbestos-Containing Materials (ACM) Regulations*

State-level agencies, in conjunction with the USEPA and California Occupational Safety and Health Administration (Cal/OSHA), regulate removal, abatement, and transport procedures for asbestos-containing materials. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. For example, Title 8 of the California Code of Regulations, Section 1529 (Asbestos), provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos.

### *Polychlorinated Biphenyls (PCBs) Regulations*

USEPA prohibited the use of PCBs in the majority of new electrical equipment starting in 1979 and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and the handling of those PCBs are regulated by the provisions of the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq. (TSCA). Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal. The state likewise regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste; these regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for non-liquids, regional water quality control boards may exercise discretion over the classification of such wastes.

### *Lead-Based Paint (LBP) Regulations*

California Occupational Safety and Health Administration's (Cal/OSHA) Lead in Construction Standard is contained in Title 8, Section 1532.1 (Lead) of the California Code of Regulations. The regulations address all of the following areas: permissible exposure limits; exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection; employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

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### HAZARDS AND HAZARDOUS MATERIALS

#### Regional

##### *South Coast Air Quality Management District*

South Coast Air Quality Management District (SCAQMD) Rule 1403 governs the demolition of buildings containing asbestos materials. Rule 1403 specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACMs. The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and cleanup procedures, and storage and disposal requirements for asbestos-containing waste materials.

#### Local

##### *Long Beach Emergency Response Plan*

The Long Beach Emergency Operations Plan (EOP) was approved by City Council on August 2015. The EOP, which is overseen and managed by the Office of Disaster Preparedness & Emergency Communications, meets the SEMS requirements of state law. The EOP addresses the planned response by the City of Long Beach to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The purpose of the EOP is to guide the mitigation, response, and recovery efforts of the City of Long Beach before, during and after an emergency. Under the EOP, The Emergency Planning Team provides dedicated staff responsible for managing the City's Emergency Operations Center (EOC), which include personnel from City departments (e.g., Long Beach Fire Department and Long Beach Police Department), supporting allied agencies and community organizations that have been assigned primary functions or responsibilities within the EOP (Long Beach 2015).

##### *Long Beach Hazard Mitigation Plan*

In 2017, the City adopted a Hazard Mitigation Plan in response to Disaster Mitigation Act of 2000 (also known as Public Law 106-390), which requires state and local governments to prepare Mitigation Plans to document their Mitigation Planning process, and identify hazards, potential losses, mitigation needs, goals, and strategies. This type of planning supplements the City's comprehensive emergency management program. The Disaster Mitigation Act of 2000 is intended to facilitate cooperation between state and local governments, prompting them to work together. Through collaboration, mitigation needs can be identified before disasters strike, resulting in faster allocation of resources and more effective risk reduction projects. The City's Plan includes a hazard assessment, goals and objectives, and mitigation strategies for seven hazards, including earthquake, flood, windstorm, tsunami, public health, technological and human-caused, and drought.

##### *Long Beach Municipal Code*

The following sections in Title 8 (Health and Safety) of the City of Long Beach Municipal Code address hazards and hazardous materials:

- Chapter 8.27 (Community Lead Hazard Control/Abatement)

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- Chapter 8.86 (Hazardous Materials Release Response Plans and Inventory)
- Chapter 8.87 (Hazardous Waste Control)
- Chapter 8.88 (Hazardous Materials – Cleanup)

#### 5.7.1.2 EXISTING CONDITIONS

##### Current Uses of the Plan Area

The Plan Area is currently comprised of a combination of one and two-story rehabilitated Naval housing and new one, two, three, four and five-story residential buildings some of which are built over enclosed garages that are lined with ground floor functions including service providers and community spaces. There are currently 865 dwelling units in the Plan Area, in addition to 12,380 square feet of amenities, 10,200 square feet of education uses, and 5,850 square feet of commercial and retail, and 26,300 square feet of services and administration. There is also approximately 5,000 square feet (0.11 acres) for play area that consists of playground, mural, shade structures, tetherball, and other amenities. Open space and parking areas also spread throughout the Plan Area.

##### Historical Uses of the Plan Area

Based on a review of historical aerial photographs, topographic maps, and databases, the Plan Area appears to have been mostly vacant land until it was developed into naval housing in the late 1940s/1950s until 1991 when the naval shipyard closed and the housing was transferred to assist homeless persons. In 1896, there was a structure in the northern portion of the Plan Area and was no longer present in 1923. Oil refineries and tank farms were present northwest of the Plan Area in 1942. The Plan Area has not been used for mining operations or agricultural purposes.

##### Recognized Environmental Conditions

“Recognized environmental conditions” are defined by the American Society of Testing and Materials as any hazardous substance or petroleum product under conditions that indicate an existing, past, or material threat of release into the structures, ground, groundwater, or surface water at the site. The identified presence of recognized environmental conditions at the site may warrant additional research, site investigation, and/or action. Based on the results of the Phase I Environmental Site Assessment (ESA) (Appendix F), no recognized environmental condition, historical recognized environmental condition, or controlled recognized environmental condition were identified in the Plan Area (PlaceWorks 2020).

##### *Asbestos-Containing Materials and Lead-Based Paint*

ACMs were commonly used in a wide variety of building products prior to 1980, such as roofing shingles, composite siding, linoleum flooring, acoustic ceiling tiles, furnace and water heater exhaust piping and insulation, glues and mastics, stucco, joint compounds, and composite wallboards. ACMs can be divided into material considered friable (easily crumbled or reduced to powder) and nonfriable. Friable ACMs are regulated as hazardous materials due to the elevated long-term risk of developing lung cancer upon respiratory exposure and must be properly removed prior to renovation or demolition of any structure

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### HAZARDS AND HAZARDOUS MATERIALS

containing these materials. The majority of buildings that will be demolished under the Specific Plan were buildings that were primarily either rehabilitated or reused during the initial construction of the former Naval housing.

No testing is known to have been performed to evaluate for the presence of ACMs or lead-based paints (LBP) in the Plan Area. Additionally, due to the age of the buildings and structures throughout the Plan Area (many over 50 years old), it is likely ACMs and LBP, as well as other building materials containing lead (e.g., ceramic tile), were used in their construction. Therefore, there is potential for ACM and LBP materials to existing in the buildings of the Plan Area.

#### *Polychlorinated Biphenyls*

Prior to the 1970s, polychlorinated biphenyls (PCBs) were used in fluids for insulation and cooling. PCBs are considered toxic environmental contaminants, and the EPA banned the manufacture of PCBs in 1979. PCBs have been demonstrated to cause cancer and have a variety of adverse health effects on the immune system, reproductive system, nervous system, and endocrine system. According to the result of the Phase I ESA, no PCBs associated with electrical or hydraulic equipment were found to occur in the Plan Area (PlaceWorks 2020).

### 5.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- H-2 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.
- H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.
- H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- H-5 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 result in a safety hazard or excessive noise for people residing or working in the project area.
- H-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

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H-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold H-1
- Threshold H-4
- Threshold H-5
- Threshold H-6
- Threshold H-7

These impacts will not be addressed in the following analysis.

### 5.7.3 Environmental Impacts

#### 5.7.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.7-1:** Construction and operation of development accommodated by the Specific Plan could 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 and within one-quarter mile of an existing school site. [Thresholds H-2 and H-3]

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**Impact Analysis:** Following is a discussion of the Specific Plan's potential to create a significant hazard to the public or the environment in and around the Plan Area through the accidental release of hazardous materials during the operational and construction phases of Specific Plan. Impacts to the public include potential impacts to the two schools that are within one-quarter mile of the Plan Area, which include Cabrillo High School and California State Long Beach Technology and which border the Plan Area to the north and south, respectively.

#### Hazardous Materials Associated with Project Operation

Proposed and permitted land uses in the Plan Area include residential, commercial/retail, educational, administrative and supportive services, and open space uses. The development of industrial uses or other land uses involving the storage, use, transport, and disposal of large amounts of hazardous wastes are not proposed and would not be permitted under the Specific Plan. No manufacturing, industrial, or other uses utilizing large amounts of hazardous materials would occur in the Plan Area.

Operation of the proposed residential uses would involve the use of small quantities of hazardous materials for cleaning and maintenance purposes, such as paints, household cleaners, fertilizers, and pesticides. The

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### HAZARDS AND HAZARDOUS MATERIALS

types of hazardous materials that could be used during operation of future nonresidential uses (commercial/retail, educational, administrative and supportive services) are anticipated to include cleaning and maintenance products, paints, and solvents and degreasers.

The operation of the permitted uses under the Specific Plan would not involve the routine use, storage, transport, and disposal of hazardous materials, however, should such activities occur with the Plan Area they would be governed by existing regulations set forth by several agencies. Regulations that would be required of those uses that involve transporting, using or disposing of hazardous materials include RCRA, which provides the ‘cradle to grave’ regulation of hazardous wastes; CERCLA, which regulates closed and abandoned hazardous waste sites; the Hazardous Materials Transportation Act, which governs hazardous materials transportation on U.S. roadways; IFC, which creates procedures and mechanisms to ensure the safe handling and storage of hazardous materials; CCR Title 22, which regulates the generation, transportation, treatment, storage and disposal of hazardous waste; and CCR Title 27, which regulates the treatment, storage and disposal of solid wastes. For development within the State of California, Government Code Section 65850.2 requires that no final certificate of occupancy or its substantial equivalent be issued unless there is verification that the owner or authorized agent has met, or is meeting, the applicable requirements of the Health and Safety Code, Division 20, Chapter 6.95, Article 2, Sections 25500 through 25520.

The Long Beach Fire Department (LBFD) and Long Beach Bureau of Environmental Health (BEH) jointly function as the Certified Unified Program Agency (CUPA) for the City, and are responsible for enforcing Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory) of the Health and Safety Code. As the CUPA, LBFD and BEH are required to regulate hazardous materials business plans and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, and risk-management plans. The Hazardous Materials Business Plan is required to contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of on development sites. The plan also contains an emergency-response plan, which describes the procedures for mitigating a hazardous release, procedures, and equipment for minimizing the potential damage of a hazardous materials release, and provisions for immediate notification of the LBFD, BEH the Office of Emergency Services, and other emergency-response personnel, such as the local fire agency having jurisdiction. Implementation of the emergency response plan facilitates rapid response in the event of an accidental spill or release, thereby reducing potential adverse impacts. Furthermore, BEH is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventative measures to minimize the risk of a spill or release of hazardous substances.

Compliance with applicable laws and regulations governing the use, storage, transport, and disposal of hazardous materials would ensure that all potentially hazardous materials associated with future development accommodated by the Specific Plan are used and handled in an appropriate manner and would minimize the potential for safety impacts. Compliance with these laws and regulations is ensured through the City’s development review and building plan check process.

Based on the preceding, hazards to the public or the environment arising from an accidental release of hazardous materials during project operation are not anticipated to occur.



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### Hazardous Materials Associated with Project Construction

#### *Construction Activities*

Construction of development projects pursuant to the Specific Plan would involve the use of larger amounts of hazardous materials than would project operation, such as fuels, lubricants, and greases in construction equipment and coatings used in construction. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short term or one time in nature.

Additionally, as with project operation, the use, transport, and disposal of construction-related hazardous materials would be required to conform to existing laws and regulations. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts to occur. For example, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations. All contaminated waste would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility.

Furthermore, strict adherence to all emergency response plan requirements set forth by LBFD and BEH would be required through the duration of the construction of each individual development project. Therefore, substantial hazards to the public or the environment arising from the routine use of hazardous materials during project construction would not occur, and impacts are not anticipated to be significant.

#### *Demolition Activities*

Future development projects pursuant to the Specific Plan would require demolition of existing buildings and structures in the Plan Area. Due to the age of the buildings and structures throughout the Plan Area (many over 50 years old), it is likely that ACMs and LBP, as well as other building materials containing lead (e.g., ceramic tile), were used in their construction. Demolition of these building and structures can cause encapsulated ACM (if present) to become friable and, once airborne, they are considered a carcinogen.<sup>1</sup> A carcinogen is a substance that causes cancer or helps cancer grow. Demolition of the existing buildings and structures can also cause the release of lead into the air if not properly removed and handled. The United States Environmental Protection Agency (EPA) has classified lead and inorganic lead compounds as "probable human carcinogens" (EPA 2016). Such releases could pose significant risks to persons living and working in and around Plan Area, as well as to project construction workers.

Abatement of all ACM and LBP encountered during any future building demolition activities would be required to be conducted in accordance with all applicable laws and regulations, including those of the EPA (which regulates disposal); US Occupational Safety and Health Administration; US Department of Housing and Urban Development; Cal/OSHA (which regulates employee exposure), and SCAQMD. For example,

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<sup>1</sup> When dry, an ACM is considered friable if it can be crumbled, pulverized, or reduced to powder by hand pressure. If it cannot, it is considered non-friable ACM. It is possible for non-friable ACM to become friable when subjected to unusual conditions, such as demolishing a building or removing an ACM that has been glued into place.

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SCAQMD Rule 1403, requires that the owner or operator of any demolition or renovation activity have an asbestos survey performed prior to demolition. California Code of Regulations, §1532.1, requires testing, monitoring, containment, and disposal of LBP such that exposure levels do not exceed CalOSHA standards. Compliance with these regulations would reduce the project's potential impacts related to hazardous emissions or materials. Impacts would be less than significant.

#### 5.7.4 Cumulative Impacts

The area considered for cumulative impacts is the City of Long Beach and related projects. Hazards and hazardous waste impacts are typically unique to each site and do not usually contribute to cumulative impacts. Cumulative development projects would be required to assess potential hazardous materials impacts on the development site prior to grading. The Specific Plan and other cumulative projects would be required to comply with laws and regulations governing hazardous materials and hazardous waters used and generated as described in Section 5.7.1.1. Therefore, cumulative impacts related to hazards and hazardous materials would be less than significant after regulatory compliance.

#### 5.7.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impact would be less than significant: Impact 5.7-1.

#### 5.7.6 Mitigation Measures

No mitigation measures are required.

#### 5.7.7 Level of Significance After Mitigation

Impact 5.7-1 is less than significant and no mitigation is required.

#### 5.7.8 References

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### HAZARDS AND HAZARDOUS MATERIALS

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### 5.8 HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts of the Villages at Cabrillo Specific Plan (Specific Plan) to hydrology and water quality conditions in the City of Long Beach. Hydrology deals with the distribution and circulation of water, both on land and underground. Water quality deals with the quality of surface- and groundwater. Surface water includes lakes, rivers, streams, and creeks; groundwater is under the earth's surface. The analysis in this section is based in part on the following sources:

- *Technical Report, Water Resources*, KPFF, June 19, 2020. (Appendix G2)
- *Utility Infrastructure Technical Report: Water*, KPFF, July 10, 2020. (Appendix G3)
- *Water Supply Assessment*, Long Beach Water, May 28, 2020. (Appendix G4)

A complete copy of these technical reports are included in Appendix G of this DEIR.

#### 5.8.1 Environmental Setting

##### 5.8.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, or guidelines related to hydrology and water quality that are applicable to the Specific Plan are summarized below.

##### Federal Regulations

###### *Clean Water Act and National Pollution Elimination Discharge System*

The Clean Water Act establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters (US Code, Title 33, §§ 1251 et seq.). Under the act, the US Environment Protection Agency (EPA) is authorized to set wastewater standards and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that discharge directly into Waters of the United States. The federal Clean Water Act requires wastewater treatment of all effluent before it is discharged into surface waters. NPDES permits for such discharges in the project region are issued by the Los Angeles Regional Water Quality Control Board (RWQCB).

###### *Safe Drinking Water Act*

The Safe Drinking Water Act (SDWA), the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since it came into law. The SDWA authorizes the EPA to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State

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### HYDROLOGY AND WATER QUALITY

Water Resources Control Board (SWRCB) conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

#### State Regulations

##### *Porter-Cologne Water Quality Control Act*

Under the Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.), which was passed in California in 1969 and amended in 2013, the SWRCB has authority over State water rights and water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a RWQCB to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater.

##### *State Water Resources Control Board Construction General Permit*

The SWRCB has adopted a statewide Construction General Permit (Order No. 2012-0006-DWQ) for stormwater discharges associated with construction activity. These regulations prohibit the discharge of stormwater from construction projects that include one acre or more of soil disturbance. Construction activities subject to this permit include clearing, grading, and other disturbance to the ground, such as stockpiling or excavation, that results in soil disturbance of at least one acre of total land area. Individual developers are required to submit Permit Registration Documents (PRDs) to the SWRCB for coverage under the NPDES permit prior to the start of construction. The PRDs include a Notice of Intent (NOI), risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

The NPDES Construction General Permit requires all dischargers to (1) develop and implement a SWPPP, which specifies best management practices (BMPs) to be used during construction of the project; (2) eliminate or reduce non-storm water discharge to stormwater conveyance systems; and (3) develop and implement a monitoring program of all specified BMPs. The two major objectives of the SWPPP are to (1) help identify the sources of sediment and other pollutants that affect the water quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-storm water discharges.

##### *State Water Resources Control Board Trash Amendments*

On April 7, 2015, the State Water Board adopted an Amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan). Together, they are collectively referred to as "the Trash Amendments". The purpose of the Trash Amendments is to reduce trash entering waterways Statewide, provide consistency in the SWRCB's regulatory approach to protect aquatic life and public health beneficial uses, and reduce environmental issues associated with trash in State waters. There are two compliance tracks:

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- Track 1: Permittees install, operate, and maintain a network of certified Full Capture Systems (FCS) to capture trash in storm drains, located in priority land use areas for municipal systems, and the entire facility for industrial and commercial permit holders
- Track 2: Permittees install, operate, and maintain any combination of controls (structural and/or institutional) anywhere in their jurisdiction as long as they demonstrate that their system performs as well as Track 1

The Trash Amendments provide a framework for permittees to implement its provisions. Full compliance must occur within 10 years of the permit and permittees must also meet interim milestones such as average load reductions of 10 percent per year.

#### *The Sustainable Groundwater Management Act*

The Sustainable Groundwater Management Act of 2014 passed in September 2014, and is a comprehensive three-bill package that provides a framework for the sustainable management of groundwater supplies by local authorities. The Sustainable Groundwater Management Act requires the formation of local groundwater sustainability agencies to assess local water basin conditions and adopt locally-based management plans. The Sustainable Groundwater Management Act provides 20 years for groundwater sustainability agencies to implement plans, achieve long-term groundwater sustainability, and protect existing surface water and groundwater rights. The Sustainable Groundwater Management Act also provides local groundwater sustainability agencies with the authority to require registration of groundwater wells, measure and manage extractions, require reports and assess fees, and request revisions of basin boundaries, including establishing new subbasins. Furthermore, under the Sustainable Groundwater Management Act, groundwater sustainability agencies responsible for high- and medium-priority basins must adopt groundwater sustainability plans within five to seven years, depending on whether the basin is in critical overdraft.

### Regional Regulations

#### *Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*

The Los Angeles RWQCB's Basin Plan ("Basin Plan") is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan:

- Designates beneficial uses for surface and ground waters,
- Sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy,
- Describes implementation programs to protect all waters in the Region.

In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations.

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The Basin Plan is a resource for the Regional Board and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. Finally, the Basin Plan provides valuable information to the public about local water quality issues.

#### *Water Replenishment District of Southern California Groundwater Basins Master Plan*

The Water Replenishment District of Southern California (WRD), in coordination with other basin stakeholders, developed the Groundwater Basins Master Plan (GBMP). The intent of the plan is to provide a single reference document for parties operating within and maintaining the West Coast and Central groundwater basins. The plan is intended to help guide the stakeholders to develop and assess initial concepts for additional recharge and pumping from these basins to utilize the basins fully and reduce dependence on imported water. Furthermore, the GBMP identifies projects and programs to enhance basin replenishment, increase the reliability of groundwater resources, improve and protect groundwater quality, and ensure that the groundwater supplies are suitable for beneficial uses (WRD 2016).

#### *Los Angeles RWQCB (MS4) Permit for the City of Long Beach*

On March 11, 2014, the Los Angeles RWQCB adopted a Municipal Separate Stormwater Sewer System (MS4) Permit for discharges from the City of Long Beach MS4. The MS4 permit (Order No. R4-2014-0024, NPDES No. CAS004003) was subsequently amended by Order No. R4-2014-0024-A01 on November 23, 2016. The municipal discharges of storm water and non-storm water by the City are subject to waste discharge requirements as set forth by this MS4 permit.

#### *Los Angeles County Standard Urban Storm Water Mitigation Plan*

Pursuant to NPDES permit requirements, the County of Los Angeles was required to submit Standard Urban Storm Water Mitigation Plans (SUSMPs). The SUSMPs are plans that designate best management practices (BMPs) that must be used in specified categories of development projects. The County submitted SUSMPs, but the Regional Water Board approved the SUSMPs only after making revisions. The Executive Officer issued the revised SUSMPs on March 8, 2000. On October 5, 2000 the Regional Water Board made more changes. The change sheet at the end of the State Board Order approved SUSMPs changes the March 8, 2000 version of SUSMPs (LARWQCB 2018).

### Local Regulations

#### *City of Long Beach Low Impact Development Best Management Practices Design Manual*

In order to comply with the updated MS4 Permit, a “Low Impact Development (LID) Best Management Practices (BMP) Design Manual” was developed in advance of the final permit. This manual details actions for compliance with the LID regulations adopted in City Ordinance No. ORD-10-035, including land development policies pertaining to LID and hydromodification for new development and significant redevelopment projects. The term “hydromodification” refers to the changes in runoff characteristics from a watershed caused by changes in land use condition. More specifically, hydromodification refers to “the change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow,



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interflow, and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.” The use of LID BMPs in project planning and design is to preserve a site’s predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. LID BMPs try to offset these losses by introducing structural and non-structural design components that restore these water quality functions into the project’s land plan (Long Beach 2013).

#### *City of Long Beach Municipal Code*

**Chapter 8.96 – Stormwater and Runoff Pollution Control:** The purpose of this Chapter is to protect and improve water quality of receiving waters by:

- Prohibiting illicit discharges to the municipal stormwater system
- Eliminating illicit connections to the municipal stormwater system
- Eliminating spillage, dumping, and disposal of pollutant materials into the municipal stormwater system
- Reducing pollutant loads in stormwater and urban runoff from land uses and activities identified in the Municipal NPDES Permit.

The intent of this Chapter is to enhance and protect the water quality of the receiving waters of the United States in a manner that is consistent with the Clean Water Act and acts supplementary to applicable regulations and the Municipal NPDES Permit.

**Chapter 18.61 - NPDES and SUSMP Regulations:** The purpose of this chapter is to provide regulations and give legal effect to certain requirements of the NPDES permit issued to the City of Long Beach, and the subsequent requirements of the Standard Urban Storm Water Mitigation Plan (SUSMP), mandated by Los Angeles RWQCB. The intent of these regulations is to effectively prohibit non-storm water discharges into the storm drain systems or receiving waters and to require source control BMP to prevent or reduce the discharge of pollutants into the storm water to the maximum extent practicable.

**Chapter 18.75 – Grading, Excavation, and Fills:** The provisions of this chapter apply to grading, excavation and earthwork construction, including erosion control requirements.

**Chapter 18.74 – Low Impact Development Standards:** The purpose of this chapter is to require the use of LID standards in the planning and construction of development projects. The provisions of this section apply to all new development and redevelopment projects in the City of Long Beach. However, the following development or redevelopment projects are exempt from the requirements of this chapter:

- Any development or redevelopment projects that creates, adds or replaces less than five hundred (500) square feet of impervious surface area
- Any development or redevelopment projects involving emergency construction activities required to immediately protect public health and safety

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- Any development or redevelopment projects involving the grinding/overlaying and replacement of existing parking lots
- Any development or redevelopment projects where land disturbing activities result in the replacement of fifty percent (50%) or less of an existing building, structure or impervious surface area
- Any development or redevelopment projects that are technically infeasible pursuant to Subsection 18.74.040.B
- Any development or redevelopment projects that do not require a building permit.

The chapter also specifies LID requirements for new development or redevelopment projects for residential development of 5 units or more and nonresidential development. If redevelopment alters more than fifty percent (50%) of existing buildings, structures or impervious surfaces of an existing developed site, the entire site shall comply with the standards and requirements of this chapter and of the LID Best Management Practices Manual.

#### *City of Long Beach LID Ordinance*

The City's LID Ordinance requires applicable development or redevelopment to submit a LID Plan to the City for approval prior to the City issuing any building or grading permits. Since the Specific Plan includes multiple landowners with multiple projects, individual development projects that would be accommodated by the Specific Plan will be subject to the requirements of the City's LID Ordinance, requiring the development of a project-specific LID Plan. Project-specific LID Plans within the project area will be required to ensure all of the requirements of the City's LID Ordinance on stormwater quality are addressed for that project. This includes meeting any new requirements associated with development projects, as well as the requirements of the MS4 permit (or subsequent MS4 Permits), which includes LID features and/or hydromodification controls.

#### 5.8.1.2 EXISTING CONDITIONS

##### Regional Drainage

The Los Angeles RWQCB encompasses all coastal watersheds and drainages flowing to the Pacific Ocean between Rincon Point (on the coast of western Ventura County) and the eastern Los Angeles County line. In addition, the Los Angeles RWQCB includes all coastal waters within three miles of the continental and island coastlines.

##### Local Drainage

The Plan Area is located within the Los Angeles River Watershed in the Los Angeles Basin. The Los Angeles River Watershed covers approximately 834 square miles and is bounded at its headwaters by the Santa Monica, Santa Susana, and San Gabriel mountains to the north and west. The southern portion of the watershed captures runoff from urbanized areas surrounding downtown Los Angeles. Jurisdictions in the watershed include the City of Los Angeles (33%), 42 other cities (29%) and eight agencies (37%).

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Much of the watershed is highly developed, with residential (36%), open space and agricultural (44%), and commercial/industrial/transportation (20%) being the predominant land uses. Overall, the watershed is approximately one-third impervious.

Most portions of the Los Angeles River are completely channelized for flood protection as are many of its tributaries including Compton Creek, Rio Hondo, Arroyo Seco and Tujunga Wash. They are fed by a complex underground network of storm drains and a surface network of tributaries. Several dams and reservoirs have been constructed within the watershed for flood control and groundwater recharge. The river's two soft-bottom reaches consist of a 3.1-mile portion running adjacent to Los Angeles and Glendale known as the Glendale Narrows and a 2.4-mile portion in the Sepulveda Basin Recreational area behind the Sepulveda Dam. The average dry weather flow at the watershed's most downstream monitoring station near Long Beach is 153 cubic feet per second. The average wet weather flow is two to three times higher or more during large storms.

#### Site Hydrology

The basic drainage pattern for the Plan Area runs from north to south. Runoff is directed to three main discharge locations. Most of the runoff is drained to underground storm drainpipes via sheet flow in the streets and catch basins throughout the property. The main outlet for these storm drainpipes occurs at River Avenue, where a 35 by 24-inch arch pipe connects to a 42-inch mainline. The mainline conveys stormwater to a 54-inch mainline in Pacific Coast Highway. A small amount of runoff drains to an existing earthen channel on the west side of the campus, next to State Route 103. The storm drain system within the site is private and is maintained by Century Villages at Cabrillo.

The existing development on the Plan Area generates a flow rate of 59.78 cubic feet per second (cfs) and a volume of 8.37 acre-feet (ac-ft) from a 10-year storm event.

Throughout the site, stormwater quality is addressed using methods and requirements as outlined in the Los Angeles County SUSMP and the City's LID design manuals. For example, catch basin, grate filter inserts, detention basins, vegetated swale, tree planting, and hydrodynamic separator units<sup>1</sup> are used throughout the site.

#### Surface Water Quality

Section 303(d) of the 1972 Federal Clean Water Act requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit an updated list, called the 303(d) list, to the EPA every two years. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing impairment and establishes a priority for developing a control plan to address the impairment. The list also identifies water bodies where 1) a Total Maximum Daily Load (TMDL) has been approved by the EPA and implementation is available, but water quality standards are not yet met, and 2) water bodies where the water quality problem is being addressed by an action other than a TMDL and water quality standards are not yet met.

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<sup>1</sup> Hydrodynamic separators separate and trap debris, sediment, and hydrocarbons from stormwater runoff.

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Constituents of concern listed for the Los Angeles River estuary at Queensway Bay include chlordane<sup>2</sup>, DDT<sup>3</sup>, polycyclic aromatic hydrocarbons<sup>4</sup>, polychlorinated biphenyls (PCBs)<sup>5</sup>, toxicity, and trash (SWRCB 2019).

#### Groundwater

Roughly fifty-five percent of the City's potable water demand is groundwater obtained from the adjudicated Central Basin Aquifer. The Central Basin encompasses about 277 square miles in mostly urbanized southern Los Angeles County. The Central Basin is bounded on the north by a surface divide called the La Brea high, and on the northeast and east by the Elysian, Repetto, Merced and Puente Hills (LBWD 2016). The Central Basin has a storage capacity of approximately 13.8 million-acre feet. The City is located in the southern point of the Central Basin.

The Long Beach Water Department (LBWD) pumps groundwater through 29 active wells throughout their service area and then transports the extracted groundwater water through a series of collection lines to its groundwater treatment plant. The treatment plant is also home to LBWD's water quality laboratories, which conduct over 50,000 water quality tests per year on LBWD's water supply (LBWD 2016).

The Central Basin needs to be protected from seawater intrusion near the confluence of the San Gabriel River where it meets the Pacific Ocean. The Alamitos Seawater Barrier was implemented to prevent ocean water from migrating underground into the Central Basin aquifers. By injecting potable or highly treated recycled water into the ground near where seawater is likely to enter the aquifers, the Seawater Barrier forms a pressure ridge that blocks the seawater's migration, thereby protecting the aquifers. The water injected into the Alamitos Seawater Barrier is either potable water from the Metropolitan Water District (MWD), or highly purified recycled water from the Water Replenishment District (WDR) of Southern California's Leo J. Vander Lans Advanced Water Treatment Facility (LVL), or a combination of the two (LBWD 2016).

#### 5.8.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- HYD-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- HYD-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

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<sup>2</sup> Chlordane is used as a pesticide

<sup>3</sup> DDT is a synthetic organic compound used as an insecticide.

<sup>4</sup> Polycyclic aromatic hydrocarbons are a class of chemicals that occur naturally in coal, crude oil, and gasoline. They also are produced when coal, oil, gas, wood, garbage, and tobacco are burned. PAHs generated from these sources can bind to or form small particles in the air.

<sup>5</sup> PCBs were used widely in electrical equipment like capacitors and transformers.

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- HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
- i) Result in a substantial erosion or siltation on- or off-site.
  - ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.
  - iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
  - iv) Impede or redirect flood flows.
- HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold HYD-3i
- Threshold HYD-3ii
- Threshold HYD-3iv
- Threshold HYD-4

These impacts will not be addressed in the following analysis.

### 5.8.3 Environmental Impacts

#### 5.8.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.8-1: Construction and/or operation of the Specific Plan would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality [Threshold HYD-1]**

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#### Construction

Clearing, grading, excavation, and construction activities associated with the Specific Plan have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials, such as fuels, solvents, and paints may present a risk to surface

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water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, development accommodated by the Specific Plan would require compliance with the Construction General Permit (CGP) Water Quality Order 2009-0009-DWQ (as amended by Order No. 2010-0014-DWQ and 2012-006-DWQ), which requires the preparation and implementation of a SWPPP. A SWPPP requires the incorporation of BMPs to control sediment, erosion, and hazardous materials contamination of runoff during construction and prevent contaminants from reaching receiving water bodies. The SWRCB mandates that projects that disturb one or more acres of land must obtain coverage under the Statewide CGP. The CGP also requires that prior to the start of construction activities, the project applicant must file PRDs with the SWRCB, which includes a NOI, risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. The construction contractor is always required to maintain a copy of the SWPPP at the site and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the issuance of a grading permit, the project applicant is required to provide proof of filing of the PRDs with the SWRCB, which include preparation of SWPPP. Categories of potential BMPs that would be implemented for this Specific Plan are described in Table 5.8-1, *Construction BMPs*.

**Table 5.8-1 Construction BMPs**

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	<ul style="list-style-type: none"> <li>• Use project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season)</li> <li>• Prevent or reduce erosion potential by diverting or controlling drainage</li> <li>• Prepare and stabilize disturbed soil areas</li> </ul>	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization
Sediment Controls	<ul style="list-style-type: none"> <li>• Filter out soil particles that have been detached and transported in water</li> </ul>	Silt fence, sediment basin, sediment trap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
Wind Erosion Controls	<ul style="list-style-type: none"> <li>• Apply water or other dust palliatives to prevent or minimize dust nuisance</li> </ul>	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
Tracking Controls	<ul style="list-style-type: none"> <li>• Minimize the tracking of soil offsite by vehicles</li> </ul>	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash.
Non-Storm Water Management Controls	<ul style="list-style-type: none"> <li>• Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment.</li> </ul>	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the

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**Table 5.8-1 Construction BMPs**

Category	Purpose	Examples
	<ul style="list-style-type: none"> <li>Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges.</li> </ul>	proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants.
Waste Management and Controls (i.e., good housekeeping practices)	<ul style="list-style-type: none"> <li>Manage materials and wastes to avoid contamination of stormwater.</li> </ul>	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use.

Source: CASQA 2012.

In addition, erosion control plans would be implemented for each phase of the Specific Plan and the Project Applicant would be required to comply with City grading permit regulations and inspections to reduce sedimentation and erosion.

Submittal of the PRDs and implementation of the SWPPP, the erosion control plan, and grading requirements throughout the construction phase of the Specific Plan would address anticipated and expected pollutants of concern as a result of construction activities. As a result, water quality impacts associated with construction activities would be less than significant.

### Operations

Once the Specific Plan has been constructed, urban runoff could include a variety of contaminants that could impact water quality. Runoff from buildings and parking lots typically contain oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season may result in an initial stormwater runoff (first flush) with high pollutant concentrations.

The existing Plan Area varies in imperviousness where there are streets, parking lots, detention basins, residential complexes, landscaping and so forth. Future development would have similar residential impervious percentages as existing because the location of land uses do not alter significantly between the existing and proposed campus. Each forthcoming project development shall apply LID BMPs in accordance with the City LID Manual. Each development project shall complete the BMP feasibility screening procedures required under section 4 of the City LID Manual, since infiltration or capture and use may or may not be feasible for some projects, based on the feasibility tables. Potential BMPs that could be implemented include:

- Infiltration Systems
- Infiltration Basins
- Infiltration Trenches

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- Infiltration Galleries
- Bioretention
- Permeable Pavements
- Dry Wells
- Hybrid Bioretention Dry Wells
- Stormwater Capture and Use
  - Cistern
- A Combination of the Above
  - Bioretention With Underdrain
  - Planter Boxes
  - Bioinfiltration
  - Vegetated Swales
  - Filter Strips

Borings completed onsite found groundwater at depths of 4.5 feet and 8feet below ground surface (bgs) (Geotechnologies 2019). Table 4.1 of the City of Long Beach LID BMP Manual states that infiltration measures are infeasible if the depth to groundwater is less than 5 feet below ground surface. In order for infiltration BMPs to be incorporated into future development, individual borings and geotechnical investigations would be required at the time of grading permits in order to determine the depth to groundwater (Long Beach 2013).

The BMPs incorporated into future projects would mitigate at a minimum the first flush or the equivalent of the greater between the 85th percentile storm and first 0.75-inch of rainfall for any storm event. The installed BMP systems would be designed with an internal bypass or overflow system to prevent upstream flooding due to large storm events. The stormwater which bypasses the BMP systems would eventually discharge to an approved discharge point in the public right-of-way.

Additionally, the Specific Plan would comply with all State, County, and local regulations regarding stormwater runoff during the operational phase. Therefore, water quality standards and waste discharge requirements would not be exceeded, and surface water and groundwater quality would not be degraded. Impacts would be less than significant.

***Level of Significance before Mitigation:*** Less than Significant.

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Impact 5.8-2:	Construction and/or operation of the Specific Plan would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Specific Plan may impede sustainable groundwater management of the basin [Threshold HYD-2]
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### Construction

The project applicant is engaged in a multi-year development of its property, where existing multi-family housing units would be replaced by larger, multistory mixed-use buildings. These buildings would have housing



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for low-income families, veterans, and seniors on the upper levels, and amenities like community centers, gymnasiums, and parking on the lower levels. Similarly, new administration buildings are planned to be built for CVC staff to work on-site with residents, visitors, and others who use the campus.

Although the Plan Area is currently fully developed and paved, construction activities would involve grading and excavation, which have the potential to encounter groundwater. The groundwater beneath the site is shallow and depth to groundwater was encountered between 4.5 feet and 8 feet bgs .

Groundwater could be encountered during excavation and dewatering may be required. If dewatering takes place onsite, the requirements of the Los Angeles RWQCB Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles And Ventura Counties (Order No. R4-2018-0125) would govern dewatering activities during construction. However, construction activities are temporary in nature and would not result in a substantial depletion of groundwater supplies that could result in a lowering of the groundwater table. Therefore, impacts to groundwater supplies during construction would be less than significant.

#### Operation

The Specific Plan lies within the LBWD water service area. LBWD is responsible for providing water within the City and supplies water from two primary sources: groundwater and imported water purchased wholesale from the MWD. For 2020, the available water supply is projected to consist of approximately 45 percent MWD imported water, 43 percent groundwater, and 12 percent recycled water. The LBWD 2015 Urban Water Management Plan indicates that LBWD would have sufficient water supplies to meet demands in single-dry-years and multiple-dry-years (that is, three consecutive dry years) over the period of 2020-2040 (KPFF 2020b).

Development of the Specific Plan would increase the long-term water demand associated with consumption, operational uses, maintenance, and other on-site activities. It is estimated that the Specific Plan would result in a net increase in average daily water demand of approximately 192.3 AFY. Based on LBWD's 2015 UWMP water demand projections through 2040, the water demand for the City in 2040 during normal year, single dry year, and multiple dry year hydrological conditions is expected to reach approximately 64,137 AFY with an available supply of 79,291 AFY (LBWD 2016). The Specific Plan's estimated net increase in water demand of approximately 192.3 AFY is well within the City's residual water supply. Therefore, LBWD would be able to meet the water demand for the Specific Plan in combination with existing and planned water demand in its future service area.

Furthermore, the Plan Area is not on an active recharge site and the Specific Plan would result in a change to impervious surfaces from 72 to 72.8 percent, which would not significantly alter groundwater recharge in the Plan Area. Therefore, impacts on groundwater recharge would be less than significant.

***Level of Significance before Mitigation:*** Less than Significant.

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**Impact 5.8-3:** Construction and/or operation of the Specific Plan would not 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 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. [Threshold HYD-3iii]

The Specific Plan would not involve the alteration of any natural drainages or watercourses. Furthermore, impacts related to polluted runoff are addressed in Impact 5.8-1 above.

Storm drainage collection, treatment and conveyance on the Plan Area are regulated by the City. The City has adopted the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual as its basis of design for storm drainage facilities and requires public and private storm drain infrastructure to be designed to the 10-year storm interval.

The land uses between the proposed and existing conditions do not change drastically, as the site would remain a low-income, senior, and veteran housing complex. After performing a hydrologic analysis, as directed in the LACDPW Hydrology Manual, total runoff flow rate generated from the proposed site from a 10-year storm is estimated to be less than that of the existing site. However, the total runoff volume would increase. This is due to the drainage subareas used for the hydrology analysis. For the existing conditions, the Plan Area was subdivided into 54 drainage subareas whereas for the proposed conditions 40 subareas were used. The larger subareas have similar or larger impervious percentages which increases the total volume from that subarea. However, with larger subareas the time of concentration decrease as well as the flow rate. Table 5.8-2 shows the difference in existing and proposed condition flow rates and volumes.

**Table 5.8-2 Comparison of Existing and Proposed Flow Rates and Volumes from a 10-year Storm Event**

Category	Existing	Proposed	Difference
Flow Rate	59.78 (cfs)	59.31 (cfs)	-0.48 (cfs)
Volume	8.37 (ac-ft)	8.44 (ac-ft)	0.06 (ac-ft)

Source: KPFF, 2020a.

Notes:

cfs – cubic feet per second

ac-ft – acre per foot

The existing storm drain system is described in Section 5.8.1.2. The Specific Plan would connect to the existing storm drain systems and would have similar discharge points. Currently, the 35-inch by 24-inch arch pipe is undersized to convey stormwater runoff from a 10-year storm via gravity flow out of the Plan Area. To meet the LA County Hydrology Manual's storage requirements, detention basins were constructed on site to store the excess volume of runoff created by existing development. This excess volume is released from the basins over a period of time at a slower flow rate due to the larger size of the watershed at buildout. Since the proposed runoff volume is only 0.06 ac-ft higher than the existing volume or less than 1 percent, the increase in hydrologic volume is considered negligible. Each phase of development is required to comply with City and

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County hydrology manual storage requirements, which will be plan checked by City staff. Therefore, impacts are considered less than significant.

***Level of Significance before Mitigation:*** Less than Significant.

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**Impact 5.8-4:** Construction and/or operation of the Specific Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan [Threshold HYD-5]

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Adherence to the State Construction General Permit (CGP), implementation of the SWPPP, and adherence to the City's grading requirements, as described in detail in Impact 5.8-1, would ensure that surface and groundwater quality are not adversely impacted during construction. In addition, implementation of the LID BMP measures at the site would ensure that water quality is not impacted during the operational phase of the Specific Plan. As a result, site development will not obstruct or conflict with the implementation of the Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.

The Plan Area will be connected to the City's public water supply. The City manages supplies to ensure withdrawals from the Central Basin Aquifer do not exceed the safe yield for the Basin, as per the Water Replenishment District of Southern California Groundwater Basins Master Plan. Therefore, the Specific Plan would not obstruct or conflict with the plan and impacts would be less than significant.

***Level of Significance before Mitigation:*** Less than Significant.

### 5.8.4 Cumulative Impacts

#### Hydrology and Drainage

Cumulative projects within the Los Angeles River Watershed could increase impervious areas and increase stormwater runoff rates. However, all projects within the watershed would be required to implement LID BMPs that include provisions for the capture and infiltration of runoff or the temporary detention of stormwater runoff that post-development runoff discharges do not exceed pre-development runoff rates, in accordance with the NPDES MS4 permit. Thus, no significant cumulative drainage impacts would occur, and project drainage impacts would not be cumulatively considerable.

#### Water Quality

Cumulative projects have the potential to generate pollutants during project construction and operation. All construction projects that disturb one acre or more of land would be required to prepare and implement SWPPPs in order to obtain coverage under the Statewide GCP. All projects within the watershed would also be required to implement LID BMPs that would be applied during project design and project operation to minimize water pollution from project operation. Thus, no significant cumulative water quality impacts would occur and project water quality impacts would not be cumulatively considerable.

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### HYDROLOGY AND WATER QUALITY

#### 5.8.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.8-1, 5.8-2, 5.8-3, and 5.8-4.

#### 5.8.6 Mitigation Measures

No mitigation measures are required.

#### 5.8.7 Level of Significance After Mitigation

No significant impacts related to hydrology and water quality were identified; therefore, no significant and unavoidable impacts would occur.

#### 5.8.8 References

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### HYDROLOGY AND WATER QUALITY

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## 5. Environmental Analysis

### 5.9 LAND USE AND PLANNING

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts to land use in the City of Long Beach from implementation of the proposed Century Villages at Cabrillo Specific Plan (Specific Plan). Land use impacts can be either direct or indirect. Direct impacts are those that result in land use incompatibilities, division of neighborhoods or communities, or interference with other land use plans, including habitat or wildlife conservation plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services or increased traffic on roadways. Indirect impacts are addressed in other sections of this DEIR.

#### 5.9.1 Environmental Setting

##### 5.9.1.1 REGULATORY BACKGROUND

State, regional, and local laws, regulations, plans, or guidelines related to land use and planning that are applicable to the Specific Plan are summarized below.

##### State

###### *California Government Code*

California Government Code provide authority for a city/county to adopt a specific plan by ordinance (as a regulatory plan) or resolution (as a policy plan). When a specific plan is adopted by ordinance, the specific plan effectively replaces portions or all of the current zoning regulations for specified parcels and becomes an independent set of zoning regulations that provide specific direction to the type and intensity of uses permitted or define other types of design and permitting criteria. The Specific Plan would be adopted by ordinance.

##### Regional

###### *Southern California Association of Governments*

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization (MPO) for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the Southern California region's MPO, SCAG cooperates with the Southern California Air Quality Management District (SCAQMD), the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents. SCAG has developed regional plans to achieve specific regional objectives, as discussed below.

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### LAND USE AND PLANNING

#### ***Regional Transportation Plan/Sustainable Communities Strategy***

On April 7, 2016, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, *Towards a Sustainable Future* (2016–2040 RTP/SCS). The 2016–2040 RTP/SCS emphasizes sustainability and integrated planning, and its vision focuses on three principles: mobility, economy, and sustainability. The 2016–2040 RTP/SCS includes a commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards as set by the federal Clean Air Act. The 2016–2040 RTP/SCS provides a blueprint for improving quality of life for residents by providing more choices for where they will live, work, and play and how they will move around (SCAG 2016).

The RTP/SCS is updated periodically to allow for the consideration and inclusion of new transportation strategies and methods. On November 7, 2019, SCAG’s Regional Council approved the release of the Draft 2020–2045 RTP/SCS (“Connect SoCal”) and its associated Program EIR. SCAG’s Regional Council adopted Connect SoCal and its associated Program EIR on May 7, 2020 for federal transportation conformity purposes only. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern (SCAG 2020).

At the time of preparation of this EIR, Connect SoCal was not fully adopted, therefore, consistency with the 2016–2040 RTP/SCS and Connect SoCal was analyzed, herein. September 3, 2020, SCAG’s Regional Council unanimously voted to approve and fully adopt Connect SoCal.

#### ***High Quality Transit Areas***

With the adoption of the 2016–2040 RTP/SCS, SCAG reinforced the importance of placing new growth near transit and has designated high quality transit areas (HQTAs), which are a part of and integrated into the RTP/SCS. An HQTA is generally a walkable transit village or corridor that is within a half mile of a well-served transit stop or a transit corridor with a service frequency of 15 minutes or less during peak commute hours. The overall land use pattern of the 2016–2040 RTP/SCS focuses jobs and housing in the region’s designated HQTAs (SCAG 2016). The Plan Area is identified as an HQTA in the 2016–2040 RTP/SCS (SCAG 2016); it is also identified as an HQTA in Connect SoCal (SCAG 2019). Separate goals, policies, or guidelines have not been adopted for HQTAs.

#### ***Transit Priority Areas***

In accordance with SB 743, *Transit priority areas* (TPA) are defined as “an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.”

A major transit stop is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (PRC § 21064.3). It also includes major transit stops that are included in the applicable regional transportation plan, for purposes of implementing the Sustainable Communities Strategy as defined by the PRC (PRC § 21155(b)).



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### LAND USE AND PLANNING

Major transit stops are extracted from 2045 plan year data of the Connect SoCal and modified by inputs from transit operators. This inventory is based on available information at the time regarding existing and planned transit service. However, transit agencies make adjustments to bus service on a regular basis.

Section 450.216 and 450.322 of the Code of Federal Regulations address development and content of the statewide transportation improvement program (STIP) and of the metropolitan transportation plan. According to Section 450.218, the STIP shall cover a period of no less than 4 years and shall be updated at least every 4 years or more frequently if the Governor of the State elects a more frequent update cycle. According to Section 450.216, the State shall develop a long-range statewide transportation plan, with a minimum 20-year forecast period at the time of adoption, that provides for the development and implementation of the multimodal transportation system for the State.

The majority of the Specific Plan Area is within a TPA, with the exception of a small portion at the western end of the Plan Area (see Figure 4-1, *Long Beach Transit Priority Areas*).

#### Local

##### *City of Long Beach General Plan*

The current Long Beach General Plan was adopted by the Long Beach City Council in 1973, and has been updated and supplemented periodically. The current General Plan has twelve elements: Air Quality, Conservation, Historic Preservation, Housing, Land Use, Local Coastal Program, Mobility, Noise, Open Space, Public Safety, Scenic Routes, Seismic Safety, and Urban Design. The Housing Element has been updated on a schedule prescribed by the California Department of Housing and Community Development (HCD), most recently on January 7, 2014. The current Mobility Element was adopted in 2012. In December of 2019, the City adopted the Land Use Element and the Urban Design Element. The update to the Land Use Element provides a blueprint for the City's growth from the time of adoption to the year 2040. The Urban Design Element focuses on the preservation of existing neighborhoods and building upon them to allow for continued adaptation and improvement of the build environment.

##### *Long Beach Bicycle Master Plan*

The City's Bicycle Master Plan was adopted in February 2017 as a citywide planning document to guide future improvements to the City's bicycle network, including the development and maintenance of bicycle-friendly roads, bikeways, support facilities, and programs. The Bicycle Master Plan envisions a future where bicycling will be the easiest, most convenient way to run errands, get to work or school, or travel for recreation within the City. This policy document aims to reduce traffic congestion by providing better facilities for biking and enhancing alternatives to commuting by car. The City aims to see 10 percent of all trips made by bicycle in 10 years, 20 percent in 20 years, and 30 percent in 30 years. This 30 percent bike mode share is part of a larger goal to have fewer than 50 percent of trips made by solo drivers by 2040.

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### LAND USE AND PLANNING

#### 5.9.1.2 EXISTING CONDITIONS

##### Onsite Land Uses

The Plan Area has been developed and redeveloped over the past 70 years, with the former Naval housing and facilities either rehabilitated or removed to accommodate new construction. Existing land uses in the Plan Area are comprised of a combination of one- and two-story rehabilitated Naval housing and new one-to five-story residential buildings, some of which are built over enclosed garages that are lined with ground floor amenities including service providers and community spaces. As shown in Table 5.9-1, the Plan Area currently contains 865 dwelling units, 12,380 square feet of amenities, 10,200 square feet of educational uses, 5,850 square feet of commercial/retail uses, and 26,300 square feet of administrative and support services. Amenities include approximately 5,000 square feet for play area consisting of playground, mural, shade structures, tetherball, and other amenities. Open space and parking areas spread throughout the Plan Area.

**Table 5.9-1 Existing Land Uses**

Land Uses	
Residential Units	865 DU
Amenities	12,380 SF
Education	10,200 SF
Commercial/Retail	5,850 SF
Services/Administration	26,300 SF
Residential	580,340 SF
<b>Total</b>	<b>635,070 SF</b>
Parking	
Commercial/Retail	73 PS
Services/Administration	6 PS
Blended Residential	433 PS
<b>Total Parking Required</b>	<b>511 PS</b>
<b>Total Parking Provided</b>	<b>520 PS</b>
Notes: DU=dwelling units; SF=square feet; PS=parking spaces	

The southern portion of the Plan Area, south of Williams Street, has outdoor spaces, circulation paths, and activity centers while the northern portion has meandering walking paths, open spaces that blend with parking lots, and pockets of activity spaces. Newer residential buildings are developed around deliberate open spaces while the rehabilitated housing units are less dense and spread evenly across portions of the Plan Area. Due to the mature tree canopy of the Plan Area, the difference in building heights, placement, and organization is often screened from view in the northern portion while the variation is more apparent on the southern portions where there are larger open spaces and newer trees. A landscape barrier running along the western perimeter of the community provides a barrier to the Terminal Island Freeway. There are also bike paths and bike infrastructure throughout and surrounding the Plan Area. Currently there are few existing bicycle facilities within 0.5-mile of the Plan Area. Pacific Coast Highway is a designated bicycle route and Santa Fe Avenue, Hill Street and Harbor Avenue are proposed bike routes.

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#### Surrounding Land Uses

Surrounding land uses primarily consist of industrial, residential, and institutional uses. The Plan Area is bordered by Cabrillo High School and associated campus facilities to the north and east; Long Beach Job Corps Center to the east; warehousing, distribution and logistics uses to the south; and warehouse, distribution and logistics uses to the west, across SR-103. Residential uses are located further to the north and northeast, beyond the institutional uses. Also, to the west is major infrastructure that serve the Port of Long Beach and Los Angeles, including the Terminal Island Freeway, San Pedro Branch railroad, and Southern California Edison's electricity transmission corridor. The large institutions, major infrastructure, I-710 Freeway, and Los Angeles River separates the Plan Area, its residents, and visitors from other Long Beach residential neighborhoods.

#### General Plan Land Use and Zoning Designations

The place type of the Plan Area pursuant to the current General Plan land use map (updated in 2019) is Regional Serving Facility (RSF). RSFs are those facilities, businesses and operations that not only serve the City, but also the region and parts of the nation.

The current zoning designation of the Plan Area is Subarea D of Planned Development District 31 (PD-31). The subarea is intended to promote the adaptive reuse of the existing housing and support facility buildings to provide transitional housing and support services to the homeless veterans and the homeless population in the City.

### 5.9.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- LU-1      Physically divide an established community.
- LU-2      Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Initial Study, included as Appendix A, establishes that impacts associated with the following threshold would be less than significant:

- Threshold LU-1

This impact will not be addressed in the following analysis.

### 5.9.3 Environmental Impacts

#### 5.9.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

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### LAND USE AND PLANNING

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**Impact 5.9-1: Implementation of the Specific Plan would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect. [Threshold LU-2]**

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**Impact Analysis:** The following is an analysis of the Specific Plan's consistency with applicable regional and laws, regulations, plans, and guidelines adopted for the purpose of avoiding or mitigating an environmental effect.

#### Long Beach General Plan Consistency

The City's General Plan sets forth the goals, policies, and directions the City will take in managing its future. It is the blueprint for development and a guide to achieving the long-term, citywide vision. The City's General Plan sets seven interrelated goals:

- Increased mobility
- Affordable housing
- Reduction in greenhouse gas emissions
- Enhanced quality of life
- Compact and transit-oriented development
- Improved water quality
- Walkable neighborhoods and districts

These goals have been integrated into the Specific Plan and are discussed relative to two elements—Land Use and Housing—that have significantly influenced the vision and goals of the Specific Plan. The Specific Plan's consistency with other elements (e.g., open space and recreation, housing, air quality, noise, mobility) of the City's General Plan is contained in the analysis provided in the respective topical sections of this DEIR.

#### *Land Use*

The Land Use Element identifies land uses within this area as those that serve a regional need for medical and social services, education, goods movement, people movement, energy production and distribution, public utilities, and uses of similar nature. Table 5.9-2 provides an assessment of the Plan Area's relationship to City's General Plan Land Use Element.

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**Table 5.9-2 Consistency with City of Long Beach General Plan Land Use Element**

General Plan Goal/Policies	Project Compliance
<b>STRATEGY No. 1: Support sustainable urban development patterns.</b>	
<b>LU Policy 1-1:</b> Promote sustainable development patterns and development intensities that use land efficiently and accommodate and encourage walking.	<b>Consistent:</b> The guiding principles, development standards, and design guidelines within the Specific Plan implement the pillars of sustainability for the Specific Plan Area, as well as promote the development of green buildings, streets, and public spaces, all of which would contribute to a sustainable neighborhood. Urban design strategies in the Specific Plan include improving connectivity by standardizing streets, connecting walkway and bicycle networks, and extending the transit system. Buildings will be developed with multiple functions to sustain growth and change in a built-out neighborhood. Internal streets and walking paths will be reconfigured and redesigned to improve vehicular and nonvehicular (active transportation) mobility throughout the Plan Area. The primary basis for the Plan Area's future mobility network emphasizes biking and walking as the primary modes of transportation within the Plan Area and public transit beyond accessing the greater Long Beach Community and Los Angeles County. Automobile movement in the Plan Area would become more efficient while transitioning to be secondary to the active transportation network. Additionally, the Specific Plan would encourage active transportation through a network of wellness trails that would be established in order to encourage walking, jogging, and biking.
<b>LU Policy 1-2:</b> Support high-density residential, mixed use and transit-oriented development within the downtown, along transit corridors, near transit stations and at neighborhood hubs.	<b>Consistent:</b> Implementation of the Specific Plan allows for high density residential uses near transit stations. The Specific Plan would result in a total of 1,380 dwelling units, 79,350 square feet of amenities, 15,000 square feet of educational uses, 22,850 square feet of commercial/retail uses, 67,050 square feet of administrative and supportive services, and 877 parking spaces. In 2018, a new West Long Beach Transit Center was developed as part of CVC's Anchor Place development. As a part of the transit center development, two existing Long Beach Transit bus routes were rerouted into the Plan Area where they begin and end their respective routes at the CVC Transit Center, which is centrally located in the Plan Area at the southwest corner of Williams Street and River Avenue. Additionally, the Wellness Trails would connect residential and non-residential uses to public transportation facilities onsite and with the wider community.
<b>LU Policy 1-3:</b> Require sustainable design strategies to be integrated into public and private development projects.	<b>Consistent:</b> Implementation of the Specific Plan would include sustainable design strategies using applicable green building practices, including those of the most current Building Energy Efficiency Standards (Title 24, California Code of Regulations, Part 6) and California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11). Furthermore, the development standards and design guidelines included in the Specific Plan are based on the gold LEED-ND certification documentation.
<b>LU Policy 1-4:</b> Require electric vehicle charging stations to be installed in new commercial, industrial, institutional and multiple-family residential development projects. Require that all parking for single-unit and two-unit residential development projects be capable of supporting future electric vehicle supply equipment.	<b>Consistent:</b> New developments in the Plan Area would be required to provide electric vehicle charging facilities. At minimum, at least three percent of total parking spaces, but not less than one stall, shall be capable of supporting electric vehicle supply equipment with pre-wired electricity service.
<b>LU Policy 1-7:</b> Encourage neighborhood-serving retail, employment and entertainment destinations in new mixed-use projects to create local, walkable daily trip destinations.	<b>Consistent:</b> The Specific Plan provides guidance as to the types of uses allowed in the Plan Area, balancing the need to ensure a harmonious mix of uses, with flexibility to adapt to the evolving needs of the community. Allowable uses generally include a variety of residential programs, social and clinical services, administrative applications, and neighborhood-serving commercial uses. For active transportation, a network of wellness trails will be established throughout the Plan Area to encourage walking, jogging, and biking.
<b>LU Policy 1-10:</b> In addition to analyzing project and plan impacts on Levels of Service and Stop	<b>Consistent:</b> A transportation impact analysis was prepared for the Proposed Project by Fehr & Peers and is included in its entirety in Appendix I of this DEIR. The traffic

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### LAND USE AND PLANNING

**Table 5.9-2 Consistency with City of Long Beach General Plan Land Use Element**

General Plan Goal/Policies	Project Compliance
Delay, analyze Vehicle Miles Traveled consistent with the State's guidelines.	impact analysis concluded that the Specific Plan would have a less than significant impact on vehicle miles travel due to its location within a transit priority area and the Project being a 100 percent affordable housing project. The findings, conclusions, and recommendations of the analysis are provided in Section 5.14, Transportation and Traffic.
<b>STRATEGY No. 2:</b> Promote efficient management of energy resources to reduce greenhouse gas emissions and the impacts of climate change by employing a full range of feasible means to meet climate goals.	<b>Consistent:</b> Under the 2019 Building Energy Efficiency Standards, future residential buildings of three stories and less in the Plan Area would be required to install solar PV systems. Furthermore, under the Specific Plan design standards, streetlights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians and vehicles. Sections 5.4, <i>Energy</i> , and 5.5, <i>Greenhouse Gas Emissions</i> , address energy, and global climate impacts that would occur as a result of implementation of the Specific Plan, and apply mitigation measures and regulatory requirements to reduce any impacts, as applicable and feasible. Furthermore, the development standards and design guidelines included in the Specific Plan are based on the gold LEED-ND certification documentation.
<b>STRATEGY No. 10: Create complete neighborhoods with identifiable centers and a full range of supporting neighborhood-serving uses to meet the daily needs of residents.</b>	
<b>LU Policy 10-1:</b> Ensure neighborhoods contain a variety of functional attributes that contribute to residents' day-to-day living, including schools, parks and commercial and public spaces.	<b>Consistent:</b> Implementation of the Specific Plan would result in a net increase of 515 dwelling units within the Plan Area, in addition to a net increase in retail, commercial, and educational space. Under the open space requirements of the Specific Plan, the additional dwelling units accommodated by the Specific Plan would result in the provision of 3.44 acres (150,000 square feet) of new open space—75,000 square feet of outdoor common residential open space, 37,500 square feet of indoor common residential open space, and 37,500 square feet of private residential open space.
<b>LU Policy 10-3:</b> Plan for and accommodate neighborhood-serving goods and services, learning facilities, public amenities and transit stops within walking distance of most residences.	<b>Consistent:</b> See response to LU Policy 1-2.
<b>LU Policy 10-4:</b> Enhance neighborhoods and connect housing to commercial uses to provide residents with an active choice to walk or bike within their local neighborhoods.	<b>Consistent:</b> See response to LU Policy 1-1 and 1-2.
<b>STRATEGY No. 11: Create healthy and sustainable neighborhoods.</b>	
<b>LU Policy 11-5:</b> Ensure neighborhoods are accessible to open spaces, parks, trails and recreational programs that encourage physical activity and walkability.	<b>Consistent:</b> The Specific Plan identifies new and enhanced amenities for current and future residents of the Plan Area. Some of the existing amenities will be realigned to better support the specific populations. The open space network is designed to transition from the most public to most private with appropriate levels of activity and access. Outdoor common residential open space, indoor common residential open space, and private residential open space will all be included under the Specific Plan to increase accessibility to various types of open spaces. Bike paths will be incorporated into the new wellness trails networks that will provide a safe, separated active transportation network with limited vehicular interruptions. The Specific Plan would result in the provision of 3.44 acres (150,000 square feet) of new open space—75,000 square feet of outdoor common residential open space, 37,500 square feet of indoor common residential open space, and 37,500 square feet of private residential open space.
<b>STRATEGY No. 12: Diversify Long Beach's housing stock.</b>	

## 5. Environmental Analysis LAND USE AND PLANNING

**Table 5.9-2 Consistency with City of Long Beach General Plan Land Use Element**

General Plan Goal/Policies	Project Compliance
<p>LU Policy 12-1: Allow a variety of housing types in new residential developments with the goal of establishing new opportunities for persons of varied income ranges, ages, lifestyles and family needs.</p> <p>LU Policy 12-2: Encourage the provision of housing opportunities, services, and amenities for all income levels, age groups, and household types, with opportunities to age in place</p> <p>LU Policy 12-3: Encourage universal design of housing products and environments, making them usable by a wide range of people with different physical and mental abilities.</p> <p>LU Policy 12-4: Allow new high-density residential growth to occur within Multi-Family neighborhoods in a manner that is context sensitive and compatible to surrounding uses and buildings and that provides a range of housing types and options that meets the needs of Long Beach residents</p> <p>LU Policy 12-6: Establish clear rules and locations for special housing types, such as congregate care, assisted living, senior housing, student housing, housing for temporary workers and housing with supportive services.</p>	<p><b>Consistent:</b> The Specific Plan would provide 1,380 new affordable dwelling units. Implementation of the Specific Plan would continue to serve the Plan Area's existing and future residents while upgrading and expanding the housing stock to address community needs. Dedicated veteran housing would continue to be the core offering with the initial phases of development focusing on replacing these units and upgrading the associated services and amenities. Housing dedicated for special needs and seniors would also be part of the Specific Plan with new facilities provided for service providers that are not currently operating in the Plan Area. Some existing amenities would be realigned to better serve the intended populations while new contemplated amenities such as a dedicated senior center would be developed for the future population.</p> <p>The Specific Plan supports a unique housing community that provides housing on any given night to over 1,500 persons. These include veteran and non-veteran individuals, families, youth, and children who are housed within the Plan Area's robust continuum of supportive housing, ranging from shelter, to transitional housing, to permanent housing. Additionally, the Specific Plan has co-located a palette variety of valuable social services to help residents regain their independence. The Specific Plan includes partnerships with more than thirty established service providers to provide these offering much needed services which include: case management, life skills training, substance abuse treatment, affordable child care, a homeless education program, an employment center, a career center, a food service program, and a VA medical clinic among others.</p> <p>The Specific Plan's mission is to develop, manage, and serve as the steward of the Villages at Cabrillo, delivering property management, real estate development, and supportive services to empower residents, restore health, and inspire hope. The Specific Plan embraces a vision of breaking the cycle of homelessness by offering residents a service-enriched, supportive environment designed to encourage self-sufficiency and promote achievement of the highest human potential. The Specific Plan seeks to provide residents a nurturing, healing environment along with the tools necessary to change behaviors and overcome barriers. Ultimately, the Specific Plan seeks to empower residents to build dreams and reintegrate into mainstream society.</p>
<b>STRATEGY No. 13: Facilitate housing type distribution.</b>	
<p>LU Policy 13-2: Provide new housing opportunities in neighborhood-serving centers and corridors, within transit-oriented development areas and downtown.</p>	<p><b>Consistent:</b> See response to LU Policy 1-1 and 1-2.</p>
<b>STRATEGY No. 18: Increase open space in urban areas.</b>	
<p>LU Policy 18-1: Require that new development creatively and effectively integrates private open spaces into project design, both as green spaces and landscaped courtyards</p> <p>LU Policy 18-4: Increase the number of trees, first prioritizing areas identified as tree deficient, to provide the maximum benefits of improved air quality, increased carbon dioxide sequestration, reduced stormwater runoff and mitigated urban heat island effect.</p>	<p><b>Consistent:</b> Under the open space requirements of the Specific Plan, the additional 750 dwelling units accommodated by the Specific Plan would result in the provision of 3.44 acres (150,000 square feet) of new open space—75,000 square feet of outdoor common residential open space, 37,500 square feet of indoor common residential open space, and 37,500 square feet of private residential open space. Open spaces shown in Figure 3-6, <i>Open Space Network</i>, demonstrate intended distribution and relationships of such spaces throughout the Plan Area. The open space network is designed to transition from the most public to most private with appropriate levels of activity and access. The exact configuration and location of open spaces will be established as part of each development.</p> <p>As noted above, a network of wellness trails will be established throughout the Plan Area to encourage walking, jogging, and biking. The wellness trail network and</p>

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### LAND USE AND PLANNING

**Table 5.9-2 Consistency with City of Long Beach General Plan Land Use Element**

General Plan Goal/Policies	Project Compliance
<b>LU Policy 18-5:</b> Enhance access to safe open space and recreation facilities for all residents.	sidewalks will include preservation, replanting and expanding the tree canopy with climate-appropriate species that retain rainwater, provide habitat for local wildlife, and reduce the local heat island and air pollution effects. The wellness trails will provide a safe, separated active transportation network with limited vehicular interruptions
Source: City of Long Beach General Plan Land Use Element	

### *Mobility*

For a comprehensive analysis of the Specific Plan's consistency with the Mobility Element, see Section 5.14 of this EIR, Transportation and Traffic.

### *Housing*

The General Plan Housing Element is a tool to guide the City in planning for present and future housing needs, including strategies and programs to improve development regulations and accommodate future growth targets for housing affordable to all household incomes. Table 5.9-3 provides an assessment of the Plan Area's relationship to the City's General Plan Housing Element. The Specific Plan promotes redevelopment of antiquated structures and underutilized areas to a mix of development accommodated by the Specific Plan which would provide quality dwelling units for residents in need while hosting modern spaces for current and new social service providers, commercial uses, and community amenities. Additionally, the General Plan Housing Element of the Long Beach General Plan consistently identified the Plan Area as an area to invest resources to expand affordable housing.

On May 27, 2020, the City of Long Beach approved Phase 6, a 90-unit affordable housing complex at 2221 West Williams Street.

**Table 5.9-3 Consistency with the City's General Plan Housing Element**

General Plan Goal	Project Compliance
<b>Goal 1: Provide Housing Assistance and Preserve Publicly Assisted Units</b>	
<b>Policy 1.1</b> Direct local financial assistance to affordable housing projects.	<b>Consistent:</b> See Response to LU Policy 12-1. Additionally, the City of Long Beach is the custodian of the Specific Plan, reviewing and approving projects being proposed within the Plan Area. Together, CVC and the City of Long Beach leverage local resources to secure funding and financing for the implementation of the Specific Plan. The Specific Plan does not provide for market rate housing and would result in a net increase of 1,380 new affordable dwelling units.
<b>Policy 1.4</b> Work with property owners, nonprofit housing providers, and tenants to encourage the preservation of assisted multi-family units at risk of conversion to market rents.	
<b>Goal 2: Address the Unique Housing Needs of Special Needs Residents</b>	
<b>Policy 2.3</b> Support provision of housing to address the needs of the disabled (including persons with developmental disabilities), the mentally ill, persons with substance problems, persons with HIV/AIDS, veterans and other groups needing transitional and supportive housing.	<b>Consistent:</b> See Response to LU Policy 12-1. Since being established, CVC has developed into a unique supportive housing community that provides housing on any given night to over 1,500 persons. These include veteran and non-veteran individuals, families, youth, and children who are housed within CVC's robust continuum of supportive housing, ranging from shelter, to transitional housing, to permanent housing. CVC is a community in



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**Table 5.9-3 Consistency with the City's General Plan Housing Element**

General Plan Goal	Project Compliance
<p><b>Policy 2.4</b> Encourage universal design of housing products and environments, making them usable by a wide range people with different physical and mental abilities.</p> <p><b>Policy 2.5</b> Integrate and disperse special needs housing within the community and in close proximity to transit and public services.</p>	<p>transition as the initial housing stock consisted of the rehabilitated structures from the Naval housing make up half of the community while newer development has infilled the other half.</p> <p>Pedestrian walkways will be between seven and ten feet in width, sized to support the surrounding levels of activity. Wider walkways will be provided adjacent to more active uses in the core of the Plan Area, with more modest pedestrian facilities serving secondary and tertiary areas. All existing and new walkways will be designed to meet (or exceed) ADA accessibility as many of the Plan Area residents have impaired mobility. Where possible, the most direct routes will be provided for pedestrians to access their residence, services, and community amenities.</p>
<b>Goal 3: Retain and Improve the Quality of Existing Housing and Neighborhoods</b>	
<p><b>Policy 3.1</b> Encourage the maintenance and improvement of the housing stock and the neighborhood context.</p> <p><b>Policy 3.4</b> Promote, where appropriate, the revitalization and/or rehabilitation of residential structures that are substandard or have fallen into disrepair.</p> <p><b>Policy 3.10</b> Support programs and projects which link affordable housing with other community development goals and resources.</p> <p><b>Policy 3.11</b> Promote green building standards in the rehabilitation of existing housing.</p>	<p><b>Consistent:</b> See Response to LU Policy 1-3 and 12-1.</p>
<b>Goal 4: Provide Increased Opportunities for the Construction of High Quality Housing</b>	
<p><b>Policy 4.5</b> Encourage residential development along transit corridors, in the downtown and close to employment, transportation and activity centers; and encourage infill and mixed-use developments in designated districts.</p> <p><b>Policy 4.7</b> Assist in establishing partnerships of nonprofit organizations, affordable housing builders, and for-profit developers, to provide greater access to affordable housing funds.</p> <p><b>Policy 4.10</b> Promote mixed-generation housing that accommodates both families and elderly households.</p>	<p><b>Consistent:</b> See Response to LU Policy LU-1, LU-2, and 12-1.</p>
<b>Goal 5: Mitigate Government Constraints to Housing Investment and Affordability</b>	
<p><b>Policy 5.3</b> Utilize Planned Developments (PD), form-based zoning and other planning tools to allow flexible residential development standards in designated areas.</p>	<p><b>Consistent:</b> The Specific Plan (which would replace the existing zoning designations of the PD-31) would be adopted by ordinance and would serve as the zoning for the Specific Plan Area. The provisions in the Specific Plan would control the use and development of property in the Plan Area to the same extent as if set forth in the City's Zoning Regulations. The Specific Plan would act as the regulatory document that the City of Long Beach would use to guide development within the Specific Plan Area, systematically implement the City's General Plan, and helping maintain consistency with and carrying out the goals, objectives, and policies of the City's General Plan. The Specific Plan would provide the flexibility, innovative use of land resources and development, a variety of housing and other development types,</p>

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**Table 5.9-3 Consistency with the City's General Plan Housing Element**

General Plan Goal	Project Compliance
	and an equitable method of vehicular, public transit, pedestrian, and bicycle access for development of the Specific Plan Area.
Source: City of Long Beach General Plan Housing Element	

#### *Conclusion*

Based on the preceding analysis, the Specific Plan would be consistent with the vision, goals, and policies of the City's adopted General Plan, including those of the Land Use, Mobility and Housing Elements.

#### **Long Beach Zoning Ordinance Consistency**

Implementation of the Specific Plan will require an amendment to the Long Beach Zoning Ordinance and Zoning Map. Specifically, the zoning ordinance amendment is required to replace the existing Planned Development District 31 (PD-31) zoning designation of the Plan Area with the new Century Villages of Cabrillo Specific Plan. An amendment to the zoning map will also be required to reflect the new Specific Plan land use designation. Additionally, the zoning ordinance amendment will state that the regulating code contained in the Specific Plan will serve as the regulatory plan (zoning, development, and design standards and guidelines) for all development projects and improvements in the Plan Area.

California Government Code Sections 65450–65457 provide authority for a local jurisdiction to adopt a specific plan by ordinance (as a regulatory plan) or resolution (as a policy plan). When a specific plan is adopted by ordinance, the specific plan replaces portions or all of the current zoning regulations for specified parcels and becomes an independent set of zoning regulations that provide specific direction to the type and intensity of uses permitted, or define other types of design and permitting criteria. The Specific Plan will be adopted by ordinance and function as the regulatory plan that serves as the implementing zoning for the Plan Area, thereby ensuring the orderly and systematic implementation of the Long Beach General Plan, as well as the orderly and systematic development of the Plan Area.

The Specific Plan (which would replace the existing zoning designations of the PD-31) would be adopted by ordinance and would serve as the zoning for the Plan Area. The provisions in the Specific Plan would control the use and development of property in the Plan Area to the same extent as if set forth in the City's Zoning Regulations. The Specific Plan would act as the regulatory document that the City would use to guide development within the Plan Area, helping maintain consistency with and carrying out the goals, objectives, and policies of the City's General Plan. The Specific Plan would provide the flexibility, innovative use of land resources and development, a variety of housing and other development types, and an equitable method of vehicular, public transit, pedestrian, and bicycle access for development of the Specific Plan Area.

The Specific Plan would establish the necessary plans, development standards (e.g., parking requirements, setbacks, building heights, etc.), design guidelines (e.g., architectural styles, building form and massing, landscaping, signage, etc.), regulations, infrastructure requirements, financing methods, and implementation programs for subsequent project-related development activities. It is intended that local public works projects,

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design review plans, detailed site plans, grading and building permits, or any other action requiring ministerial or discretionary approval applicable to the project area would be consistent with the Specific Plan.

Based on the preceding analysis, the Specific Plan would be consistent with the City's Zoning Regulations as it would replace existing zoning regulations with new provisions consistent with the Government Code and City zoning priorities. Therefore, the Specific Plan would not result in any significant land use impacts.

### Long Beach Bicycle Master Plan Consistency

The Bicycle Master Plan serves as a citywide planning document that is used to guide future improvements to the City of Long Beach bicycle network. The Bicycle Master Plan guides the development and maintenance of bicycle-friendly roads, bikeways, support facilities, and programs for the City. This policy document aims to reduce traffic congestion by providing better facilities for biking and enhancing alternatives to commuting by car.

The proposed project would be consistent with the Bicycle Master Plan as it would include dedicated bicycle facilities as part of the Specific Plan. Table 5.9-4 provides an assessment of the Plan Area's relationship to the Bicycle Master Plan.

**Table 5.9-4 Consistency with the Bicycle Master Plan**

General Plan Goal	Project Compliance
<b>Goal 1: Design bicycle facilities that are accessible and comfortable for people of all ages and abilities.</b>	
<b>Strategy 1:</b> Develop a Comprehensive Bikeway Network	<b>Consistent:</b> The Specific Plan would support bicycling by providing bicycle facilities (such as bike racks) and secured bicycle parking. The bicycle and pedestrian facilities displayed in Figure 3-6, <i>Open Space Network</i> , demonstrates the intended connections.  As part of new secure bicycle parking and bike paths incorporated into the wellness trail network, additional bike facilities will be established in future developments and programming. Additionally, until the City of Long Beach bike share program is expanded to the City's westside, CVC will work with community partners to develop a local bike share program.  The Specific Plan would reduce environmental impacts of the Plan Area's transportation network by encouraging active transportation, providing a walkable neighborhood with linkages to public transit and the surrounding community, and by promoting carsharing and carpools. The Specific Plan includes a Transportation Demand Management program that would promote alternative and shared modes of transportation and reduce the dependence of vehicles.
<b>Strategy 2:</b> Implement Citywide Bicycle Support Facilities	
<b>Strategy 3:</b> Develop a Multimodal Transportation Network that Provides for Local and Regional Mobility to Meet the Challenges of Climate Change.	
<b>GOAL 2 Increase awareness and support of bicycling through programs and social equity.</b>	
<b>Strategy 4:</b> Increase Awareness of Bicycle Safety Practices	<b>Consistent:</b> As part of the local bike share program, residents will be trained in safe bicycling and even basic bike repair in order to support their transportation independence.
Source: Bicycle Master Plan	

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Based on the preceding analysis, the Specific Plan would be consistent with the vision, goals, and policies of the City's Bicycle Master Plan. Additionally, certain aspects of the Specific Plan, including the development and maintenance of active transportation infrastructure and facilities, would promote the vision, goals, and policies of the City's Bicycle Master Plan.

### SCAG RTP/SCS Consistency

Table 5.9-5 provides an assessment of the Plan Area's relationship to pertinent 2016-2040 SCAG RTP/SCS goals. Table 5.9-6 provides an assessment of the Plan Area's relationship to pertinent SCAG's Connect SoCal Goals. The analysis in these tables concludes that the Specific Plan would be consistent with the applicable RTP/SCS goals.

**Table 5.9-5 Consistency with SCAG's 2016-2040 RTP/SCS Goals**

RTP/SCS Goal	Project Compliance with Goal
RTP/SCS G1: Align the plan investments and policies with improving regional economic development and competitiveness.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
RTP/SCS G2: Maximize mobility and accessibility for all people and goods in the region.	<p><b>Consistent:</b> Project implementation would ensure that mobility, accessibility, travel safety, and reliability for people and goods would be maximized. The vehicular, public transit, bicycle, and pedestrian circulation practices and improvements that are called for in the Specific Plan would be implemented and maintained to meet the needs of local and regional transportation and to ensure efficient mobility and access within the Plan Area and beyond. A number of regional and local plans and programs (e.g., Los Angeles County Congestion Management Program, Caltrans Traffic Impact Studies Guidelines, and City of Long Beach Traffic Impact Analysis Guidelines, Long Beach Bicycle Master Plan) would be used to guide development and maintenance of traffic, circulation, and transportation improvements within the Specific Plan Area and its surrounding roadway network.</p> <p>All modes of public and commercial transit throughout the Plan Area would be required to follow safety standards set by state, regional, and local regulatory documents. For example, pedestrian walkways and bikeways must follow safety precautions and standards established by local (e.g., City of Long Beach, County of Los Angeles) and regional (e.g., SCAG, Caltrans) agencies. Additionally, roadway improvements must follow safety standards established for the local and regional plans noted above.</p> <p>All improvements to the existing traffic and transportation networks within the Plan Area must also be assessed with some level of traffic analysis (e.g., traffic assessments, traffic impact studies) to determine how individual development projects that would be accommodated by the Specific Plan would impact existing multimodal traffic capacities and to determine the needs for improving future multimodal traffic capacities. A transportation impact analysis was prepared for the Proposed Project by Fehr &amp; Peers and is included in its entirety in Appendix I of this DEIR. The traffic impact analysis concluded that the Specific Plan would have a less than significant impact on vehicle miles travel due to its location within a transit priority area and the Project being a 100 percent affordable housing project. The findings, conclusions, and</p>
RTP/SCS G3: Ensure travel safety and reliability for all people and goods in the region.	
RTP/SCS G4: Preserve and ensure a sustainable regional transportation system.	
RTP/SCS G5: Maximize the productivity of our transportation system.	

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**Table 5.9-5 Consistency with SCAG's 2016-2040 RTP/SCS Goals**

RTP/SCS Goal	Project Compliance with Goal
	<p>recommendations of the analysis are provided in Section 5.14, <i>Transportation and Traffic</i>.</p> <p>The Specific Plan would help ensure a sustainable transportation system and help maximize the productivity of the transportation system. Project implementation would lead to the development of an improved vehicular, public transit, bicycle, and pedestrian circulation system throughout the Plan Area and its surroundings. Existing and proposed improvements to the nonvehicular modes of transportation (e.g., sidewalks, bicycle facilities) would provide convenient, efficient, and safe access to uses within the Plan Area as well as to offsite destinations while encouraging opportunities for active transportation. The Specific Plan also outlines bicycle parking and facility requirements for residential and nonresidential uses.</p> <p>The Specific Plan would help ensure a sustainable transportation system and help maximize the productivity of the transportation system. Specific Plan implementation would lead to the development of an improved bicycle and pedestrian circulation system, as mentioned above. Additionally, the Mobility Element of the General Plan, and associated addendums – including the Green TI Plan, Bicycle Master Plan and CX3 Pedestrian Plan also emphasize strengthening connections to, and reducing freight transportation impacts on the Plan Area, which the Specific Plan supports.</p> <p>The Specific Plan Area recognizes that the new West Long Beach Transit Center developed as part of CVC's Anchor Place development began service in 2018. As a part of the transit center development, two existing Long Beach Transit bus routes were rerouted into the Plan Area where they begin and end their respective routes at the CVC Transit Center, which is centrally located in the Plan Area at the southwest corner of Williams Street and River Avenue. The new transit service provides an ideal opportunity to expand affordable housing and services consistent with SCAG's goals to maximize mobility, accessibility, and safety for people and goods. Furthermore, the proposed development would increase ridership maximizing productivity and sustainability of the regional transportation system.</p>
<p><b>RTP/SCS G6:</b> Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).</p>	<p><b>Consistent:</b> The CEQA process ensures that plans at all levels of government consider all environmental impacts. Various sections of this DEIR appropriately address the potential environmental impacts related to implementation of the Specific Plan and outline mitigation measures and regulatory requirements to reduce any impacts, as applicable and feasible. For example, Sections 5.2, <i>Air Quality</i>, and 5.5, <i>Greenhouse Gas Emissions</i>, address air quality, energy, and global climate impacts that would occur as a result of implementation of the Specific Plan, and apply mitigation measures and regulatory requirements to reduce any impacts, as applicable and feasible.</p> <p>The reduction of energy use, improvement of air quality, and promotion of more environmentally sustainable development would be encouraged through the existing and proposed alternative</p>

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**Table 5.9-5 Consistency with SCAG's 2016-2040 RTP/SCS Goals**

RTP/SCS Goal	Project Compliance with Goal
	<p>transportation modes, green design techniques for buildings, and other energy-reducing techniques. For example, individual development projects that would be accommodated by the Specific Plan would be required to comply with the provisions of the 2019 Building and Energy Efficiency Standards and the 2016 California Green Building Standards Code. Compliance with these provisions would be ensured through the City's development review and building plan check process.</p> <p>Project implementation would also strive to maximize the protection of the environment and improvement of air quality by encouraging and improving the use of the region's public transportation system (i.e., bus, bicycle) for residents and workers that would be generated by the Specific Plan, as well as for existing residents and workers of the Plan Area and its surroundings. As noted above under RTP/SCS Goals G2 through G5, the Specific Plan calls for the enhancement of the existing pedestrian, bicycle, and public transit circulation system.</p> <p>Additionally, the close proximity of existing and future housing units within the Plan Area and its surroundings to existing industrial and employment-generating uses, as well as future commercial and employment-generating uses that would be accommodated under the Specific Plan, would reduce vehicle miles traveled by offering alternate modes of traveling (e.g., walking, bicycling, public transit) throughout the Plan Area, thereby reducing air quality and traffic impacts and greenhouse gas emissions.</p> <p>The Specific Plan would include a mix of development that would provide quality dwelling units for residents in need while hosting modern spaces for current and new social service providers, commercial uses, and community uses, while encouraging active transportation and public transit uses. The Specific Plan also outlines six guiding principles (which are outlined in detail in Section 3.2, <i>Statement of Objectives</i>) that accompany the vision to guide future development and improvements that would occur within the Plan Area encouraging efforts to increase non-motorized transportation, promote healthy living options, and create a more financially and environmentally sustainable future. The Specific Plan would support citywide efforts to support the current and future needs, challenges, and opportunities for the Plan Area while guiding redevelopment of antiquated building stock and available land.</p> <p>For example, one of the guiding principles calls for Plan Area to improve and develop in a sustainable manner by adapting the built and natural environments of the community for climate change while molding it into an environmentally restorative and productive system. The guiding principles, development standards, and design guidelines within the Specific Plan also implement the pillars of sustainability for the Specific Plan Area, as well as promote the development of green buildings, streets, and public spaces, all of which would contribute to a sustainable neighborhood. The Specific Plan outlines further strategies such as improving efficiencies within</p>

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**Table 5.9-5 Consistency with SCAG's 2016-2040 RTP/SCS Goals**

RTP/SCS Goal	Project Compliance with Goal
	the built environment, developing productive landscaping, and strengthening linkages.
RTP/SCS G7: Actively encourage and create incentives for energy efficiency, where possible.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
RTP/SCS G8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	<b>Consistent:</b> See response to RTP/SCS Goals G2 through G5.
RTP/SCS G9: Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
Source: 2016-2040 SCAG Regional Transportation Plan/Sustainable Communities Strategy	

**Table 5.9-6 Consistency with SCAG's Connect SoCal (2020-2045)**

RTP/SCS Goal	Project Compliance with Goal
RTP/SCS G1: Encourage regional economic prosperity and global competitiveness.	<b>Consistent:</b> Refer to the consistency analysis for Goal G1 of the 2016 RTP/SCS.
RTP/SCS G2: Improve mobility, accessibility, reliability, and travel safety for people and goods.	<b>Consistent:</b> Refer to the consistency analysis for Goals G2 through G5 of the 2016 RTP/SCS.
RTP/SCS G3: Enhance the preservation, security, and resilience of the regional transportation system.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
RTP/SCS G4: Increase person and goods movement and travel choices within the transportation system.	<b>Consistent:</b> Refer to the consistency analysis for Goals G2 through G5 of the 2016 RTP/SCS.
RTP/SCS G5: Reduce greenhouse gas emission and improve air quality.	<b>Consistent:</b> Refer to the consistency analysis for Goals G6 and G7 of the 2016 RTP/SCS.
RTP/SCS G6: Support healthy and equitable communities.	<b>Consistent:</b> This policy pertains to health and equitable communities, and these issues are addressed through guiding principles outlined under the Specific Plan, specifically the Health and Wellbeing guiding principle. The Westside Livability Plan has helped inform the Specific Plan as it seeks to bring a better balance between residents' exposure to environmental and health hazards, and the benefits and investments they want and need in order to maintain a healthy environment in which to live, learn, work, and play. Also refer to the consistency analysis for Goal G6 of the 2016 RTP/SCS.
RTP/SCS G7: Adapt to a changing climate and support an integrated regional development.	<b>Consistent:</b> The Specific Plan involves the redevelopment of antiquated structures and underutilized areas to modern, affordable housing and services along with key site improvements. This would bring employment opportunities closer to the local workforce. Additionally, the Specific Plan would provide needed services including case management, life skills training, substance abuse treatment, affordable child care, a homeless education program, an employment center, a career center, a food service program, and a VA medical clinic. This would provide more opportunities to individuals proximate to and within the Plan Area.  Co-locating jobs near housing reduces greenhouse gas emissions caused by long commutes and contributes to integrated development patterns.
RTP/SCS G8: Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	<b>Not Applicable:</b> This is not a project-specific goal and is therefore not applicable.
Source: 2012-2035 SCAG Regional Transportation Plan/Sustainable Communities Strategy.	

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#### SCAG HQTAs and SB 743 TPA Consistency

The Specific Plan would be consistent with the Urban Land Use Development Category. The Specific Plan is located within a highly urbanized area on the western edge of the City. Implementation of the Specific Plan involves the demolition of 235 dwelling units, 10,030 square feet of amenities, 10,200 square feet of educational uses, 7,250 square feet of administrative and support services, and removal of 153 parking spaces. As shown in Figure 3-4, *Proposed Development Plan*, the majority of buildings that will be demolished are along Williams Streets and toward the north end of San Gabriel Avenue. New development under the Specific Plan will include 750 dwelling units, 77,000 square feet of amenities, 15,000 square feet of educational uses, 17,000 square feet of commercial/retail uses, 48,000 square feet of administrative and supportive services, and 518 parking spaces. As shown in Table 3-1, buildout of the Plan Area under the Specific Plan will result in a total of 1,380 dwelling units, 79,350 square feet of amenities, 15,000 square feet of educational uses, 22,850 square feet of commercial/retail uses, 67,050 square feet of administrative and supportive services, and 877 parking spaces.

As previously stated, the Specific Plan is located within a HQTAs as defined by SCAG and a TPA as defined by SB 743. Additionally, access to the Plan Area is served by a well-connected street network, which consists of a grid pattern as is most of the City. As such, the Specific Plan is highly connected and provides accessibility for persons who choose not to drive or do not have access to a vehicle.

According to the 2016-2040 RTP/SCS, HQTAs may include high-density development, support pedestrian and bike infrastructure, reduce parking requirements, and retain affordable housing near transit. The Specific Plan is a modern affordable housing and service facilities project. The Specific Plan promotes pedestrian activity and bicycling activity by providing opportunities for active transportation through the implementation of new secure bicycle parking and bike paths incorporated into the wellness trail network, additional bike facilities, and a network of wellness trails to encourage walking jogging, and biking.

#### 5.9.4 Cumulative Impacts

Implementation of the Specific Plan, in conjunction with other cumulative development in accordance with the City's General Plan, could cause citywide land use and planning impacts. However, upon adoption of the Specific Plan and approval of the other project components, the Specific Plan would be consistent with applicable plans, goals, policies, and regulations of the City's General Plan, the City's Zoning Regulations, and SCAG's 2016-2040 RTP/SCS and Connect SoCal, as provided in detail above. In accordance with the City's objectives for the Plan Area, this portion of the Plan Area would be developed pursuant to the Specific Plan. Centrally located in the Plan Area, the Village Core would be developed with more active uses closer to the existing CVC Transit Center and main entrance. Village General would primarily serve as multi-family residential uses along with amenities, services, and administrative uses.

The Village Core would have more intensive functions and denser development, featuring primary administrative functions, commercial uses, and social spaces. Uses would be more passive and development lower in scale toward the outer edges of the community, within the Village General.

Section 3.4.1.5, *Development Standards* and Table 4.6A, Permitted Uses, of the Specific Plan outline the list of permitted uses, development standards, design guidelines, preferred building and frontage types, landscape



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guidelines, and strategies promoting integration between new development that would occur within the Plan Area and the existing surrounding uses.

The zoning ordinance amendment is required to replace the existing PD-31, Subarea D zoning designation of the Plan Area with the new Specific Plan. An amendment to the zoning map will also be required to reflect the new Specific Plan land use designation. The areas outside the Specific Plan would require an amendment to the Long Beach Zoning Ordinance and Zoning Map.

In addition, a host of jobs, neighborhood commercial, and other support services and uses would be within walking distance of many of the future residential uses. Therefore, implementation of Specific Plan would create a cohesive community of residential, commercial, employment-generating, open space and other support uses, contributing to the development of a sustainable urban area of the City. The Specific Plan has also been designed to enable development that would occur within the Plan Area to be constructed incrementally while still achieving a unified, comprehensive development plan.

As with the future development that would occur under the Specific Plan, cumulative development projects in accordance with the City's General Plan would be subject to compliance with the regional and local plans reviewed in this section. Therefore, implementation of cumulative development projects would not combine with the Specific Plan to result in cumulatively considerable land use impacts.

#### 5.9.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.9-1.

#### 5.9.6 Mitigation Measures

No significant adverse impacts related to land use and planning were identified and no mitigation measures are necessary.

#### 5.9.7 Level of Significance After Mitigation

No significant adverse impacts related to land use and planning were identified.

#### 5.9.8 References

Southern California Association of Governments (SCAG). 2020. Adopted Final Connect SoCal.  
<https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx>.

2016. High Quality Transit Areas (HQTAs) 2045 – SCAG Region. [http://gisdata-scag.opendata.arcgis.com/datasets/43e6fef395d041c09deaeb369a513ca1\\_1?geometry=-118.250%2C33.784%2C-118.168%2C33.796](http://gisdata-scag.opendata.arcgis.com/datasets/43e6fef395d041c09deaeb369a513ca1_1?geometry=-118.250%2C33.784%2C-118.168%2C33.796).

2016. 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.  
<http://scagrtpscscs.net/Documents/2016/final/f2016RTPSCS.pdf>.

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### 5.10 NOISE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Villages at Cabrillo Specific Plan (Specific Plan) to result in noise impacts and vibration in the City of Long Beach. This section discusses the fundamentals of sound; examines federal, state, and local noise guidelines, policies, and standards; reviews noise levels at existing noise-sensitive receptor locations; and evaluates potential noise and vibration impacts associated with the Specific Plan; and provides mitigation to reduce noise impacts at sensitive receptor locations. This evaluation uses procedures and methodologies as specified by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

#### Noise and Vibration Fundamentals

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

The following are brief definitions of terminology used in this chapter.

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level ( $L_{eq}$ ); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the  $L_{eq}$  metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level ( $L_n$ ).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the  $L_{50}$  level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The  $L_{10}$  level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and

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this is often known as the “intrusive sound level.” The  $L_{90}$  is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”

- **Day-Night Sound Level ( $L_{dn}$  or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 pm to 10:00 pm and 10 dB from 10:00 pm to 7:00 am. For general community/environmental noise, CNEL and  $L_{dn}$  values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive, that is, higher than the  $L_{dn}$  value). As a matter of practice,  $L_{dn}$  and CNEL values are interchangeable and are treated as equivalent in this assessment.
- **Peak Particle Velocity (PPV).** The peak signal value of an oscillating vibration velocity waveform usually expressed in inches per second (in/sec).
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

### Sound Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernable to most people in an exterior environment whereas a 10 dBA change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are “felt” more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

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#### Sound Measurement

Sound pressure is measured through the A-weighted scale (dBA) to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, while 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called  $L_{eq}$ ), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the  $L_{50}$  noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the  $L_2$ ,  $L_8$  and  $L_{25}$  values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. These "L" values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance, as discussed below. Other values typically noted during a noise survey are the  $L_{min}$  and  $L_{max}$ . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, an artificial dBA increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level ( $L_{dn}$ ). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 p.m. to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. The  $L_{dn}$  descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 p.m. and 10:00 p.m. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly more restrictive (i.e., higher).

#### Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing

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body tensions, and thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. Table 5.10-1 shows typical noise levels from familiar noise sources.

**Table 5.10-1 Typical Noise Levels**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2013a.

### Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium, such as the ground or a building. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers.

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#### *Amplitude*

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal, and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage. The units for PPV are normally inches per second (in/sec). Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 5.10-2 shows the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

**Table 5.10-2 Effect of Typical Vibration Levels**

Vibration Level Peak Particle Velocity	Human Reaction	Effect on Buildings
0.006–0.019 in/sec	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08 in/sec	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10 in/sec	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings
0.20 in/sec	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6 in/sec	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Source: Caltrans 2013b.

### 5.10.1 Environmental Setting

#### 5.10.1.1 REGULATORY BACKGROUND

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

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#### Federal

The US Department of Housing and Urban Development (HUD) has set the goal of 65 dBA  $L_{dn}$  as a desirable maximum exterior standard for residential units developed under HUD funding. (This level is also generally accepted within the State of California.) Although HUD does not specify acceptable interior noise levels, standard construction of residential dwellings typically provides 25 dBA (USEPA 1974) or more of attenuation with the windows closed. Based on this premise, the interior  $L_{dn}$  should not exceed 45 dBA.

#### State

##### *General Plan Guidelines*

The State of California, through its General Plan Guidelines, discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels expressed in CNEL. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements. Local municipalities adopt these compatibility standards as part of their General Plan and modify them as appropriate for their local environmental setting. Table 5.10-3 shows the City of Long Beach noise and land use compatibility standards.

##### *California Building Code*

The California Building Code (CBC), Title 24, Part 2, Volume 1, Chapter 12, Interior Environment, Section 1207.11.2, *Allowable Interior Noise Levels*, requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is evaluated as either the day-night average sound level ( $L_{dn}$ ) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

The State of California's noise insulation standards for nonresidential uses are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA  $L_{eq(1hr)}$ .

#### Local

##### *City of Long Beach General Plan Noise Element - 1975*

The City's General Plan Noise Element includes an assessment of the existing community noise environment, including surveys of residents, and an action plan for achieving goals for the future noise environment in the



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City. It aims to protect the health and well-being of residents by establishing and preserving quiet environments in the City. Applicable goals from the General Plan Noise Element to the Specific Plan are:

- To attain a healthier and quieter environment for all its citizens while maintaining a reasonable level of economic progress and development.
- To protect and preserve both the property rights of owners and the right to quietness of the citizenry at large.
- To make the City a quieter, more pleasant place in which to live.
- To diminish the transportation roar that impacts on the population.
- To respond to demands for a reasonably quiet environment which is compatible with both existing ambient noise levels and continuing building and industrial development.
- To reduce both noise exposure to the population and noise level outputs generated by the population.
- To attain the lowest possible level of harmful effects for noise on the people by the implementation of information, monitoring, and advisory programs.

Maximum acceptable noise levels per land use and time of day are summarized in Table 5.10-3, as per the Long Beach General Plan Noise Element.

**Table 5.10-3 Recommended Criteria for Maximum Acceptable Noise Levels<sup>1</sup>**

Receiving Land Use District	Outdoor			Indoor
	Maximum Single Hourly Peak <sup>1,2</sup>	L <sub>10</sub> <sup>2</sup>	L <sub>50</sub> <sup>3</sup>	L <sub>dn</sub> <sup>5</sup>
Residential (7:00 AM – 10:00 PM) <sup>4</sup>	70	55	45	45
Residential (10:00 PM – 7:00 AM) <sup>4</sup>	60	45	35	35
Commercial (anytime)	75	65	55	See Table note 6
Industrial (anytime)	85	70	60	See Table note 6

Source: City of Long Beach General Plan Noise Element, Table 11

1 Based on existing ambient level ranges in Long Beach

2 Noise levels that exceed ten percent of the time.

3 Noise levels that exceed fifty Percent of the time.

4 Includes all residential categories and all noise sensitive land uses such as hospitals, schools, etc.

5. Day/night average sound level. The 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to nighttime levels.

6. Since different types of commercial and industrial activities appear to be associated with different noise levels, identification of a maximum indoor level for activity interferences is infeasible.

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#### *City of Long Beach Municipal Code*

Chapter 8.80, *Noise*, of the Long Beach Municipal Code provides regulations to control unnecessary, excessive, and annoying noise and vibration. Exterior noise limits based on land use are shown in Table 5.10-4. The Specific Plan Area is within land use District One.

**Table 5.10-4 Exterior Noise Standards**

Receiving Land Use District	Noise Level, dBA <sup>1,2</sup>	
	7:00 AM to 10:00 PM	10:00 PM to 7:00 AM
District One	50	45
District Two	60	50
District Three	65	65
District Four	70	70
District Five	Regulated by other agencies and laws	

Source: City of Long Beach Municipal Code, Chapter 8.80, *Noise*.

Note: District One is predominantly residential with other land use types; District Two is predominantly commercial with other land use types; Districts Three and Four are predominantly industrial with other land use types; District Five covers the airport, freeways, and waterways regulated by other agencies. Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.

<sup>1</sup> If the alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the noise levels shall be reduced by 5 dBA.

<sup>2</sup> Noise levels may not exceed the noise standard:

- for a cumulative period of more than thirty minutes in any hour (L50);
- plus 5 dBA for a cumulative period of more than fifteen minutes in any hour (L25);
- plus 10 dBA for a cumulative period of more than five minutes in any hour (L8);
- plus 15 dBA for a cumulative period of more than one minute in any hour (L1); or
- plus 20 dBA for any period of time (Lmax).

#### ***HVAC***

Air conditioning or air refrigerating equipment noise standards are enforced by the LBMC Section 8.80.200(N). Equipment installed after January 1, 1980 shall not exceed:

- 55 dBA, at any point on neighboring property line, five feet above grade level, no closer than three feet from any wall.
- 50 dBA, center of neighboring patio five feet above grade level, no closer than three feet from any wall.
- 50 dBA, outside the neighboring living area window nearest the equipment location, not more than three feet from the window opening, but at least three feet from another surface.

#### ***Construction Noise***

Under Section 8.80.202, *Construction Activity, Noise Regulations*, the City prohibits construction activities from 7 PM to 7:00 AM Mondays through Fridays (including federal holidays), and before 9:00 AM or after 6:00 PM on Saturdays that “produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity.” Construction is prohibited on Sundays unless a permit has been issued.

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#### 5.10.1.2 EXISTING CONDITIONS

##### Existing Noise Environment

As shown in Figure 3-3, *Aerial Photograph*, the Plan Area consists of existing dwelling units with ancillary buildings and an open space network. To the north are Cabrillo High School sports fields; to the east is the Long Beach Job Corps Center and the Cabrillo High School; to the south are commercial/industrial uses; and to the west are SR-103, a rail line, and a rail yard.

Ambient noise levels in the Plan Area are typical of urban mixed-use neighborhoods dominated primarily by roadway traffic and rail activity.

##### *Mobile Noise*

Traffic noise modeling using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) 2.5 indicates that existing mobile noise levels range from 52 to 73 dBA Ldn throughout the Plan Area. This was based on existing noise levels at future onsite receptors (see Figure 5.10-1, *TNM Receiver Locations at Future Receptors*).

##### *Rail Noise*

The existing site of the Specific Plan Area is within 250 to 450 feet east of where the UP San Pedro Subdivision Line ends and the Harbor Freight Line starts. The Manuel Rail Yard and ICTF Rail Yard are located to the west of the Plan Area and the rail lines. Day-night average noise levels can vary depending on the number of trains operating along a given rail line per day, and the timing and duration of train pass-by events. Approximately five day trains, five night trains, and two switching trains travel along this line per day. There are no “at-grade” crossings where trains would be required to sound their horns within 2 miles of the site.

24-hour ambient noise measurements published in the Southern California International Gateway Environmental Impact Report’s Noise section (LAHD 2012)<sup>1</sup>, included two noise monitoring locations within Century Villages at Cabrillo. Measurement location N-6 was near the western property line of the Cabrillo Child Development Center within Century Villages at Cabrillo and had a CNEL value of 68.8 dBA. Measurement N-7A was conducted near the guard gate and had a CNEL value of 65.6 dBA.

##### Sensitive Receptors

The nearest off-site sensitive receptors are Cabrillo High School to the east and north, Long Beach Job Corps Center to the east, and surrounding residential beyond Cabrillo High School. Directly south of the Plan Area are commercial/industrial uses, which are not considered to be noise sensitive. Onsite receptors include residential uses and its open space network such as playgrounds and public outdoor use areas for residences.

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<sup>1</sup> The SCIG project called for the construction of an intermodal rail yard with tracks and staging areas, in addition to roads and rail lines to connect the facility to outside transportation networks. The SCIG site is located west of the Terminal Island Freeway, east of Dominguez Channel, south of Sepulveda Blvd., and north of Pacific Coast Highway.

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#### 5.10.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

- N-1        Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- N-2        Generation of excessive groundborne vibration or groundborne noise levels.
- N-3        For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold N-3

This impact will not be addressed in the following analysis.

#### Construction Noise

The City of Long Beach has not established noise limits for construction activities. For the purposes of this analysis, the FTA criterion of 80 dBA  $L_{eq}$  will be used to determine impact significance at nearby sensitive receptor property lines.

#### Transportation Noise

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, the following thresholds of significance are used to assess traffic noise impacts at sensitive receptor locations:

- Greater than 1.5 dBA increase for ambient noise environments of 65 dBA CNEL and higher;
- Greater than 3 dBA increase for ambient noise environments of 60–64 CNEL; and
- Greater than 5 dBA increase for ambient noise environments of less than 60 dBA CNEL.



Figure 5.10-1 - TNM Receiver Locations for at Future Receptors  
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#### Stationary Noise

The City of Long Beach noise standards are the thresholds for stationary sources. In addition, the City of Long Beach has noise standards for HVAC equipment, also summarized Regulatory Background. (See Table 5.10-3 and 5.10-4 above) Impacts would be considered significant if these standards are exceeded.

#### Vibration

Table 5.10-5 lists the potential vibration-induced building damage criteria associated with construction activities, as suggested in the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

FTA guidelines shows that a vibration level of up to 0.3 in/sec PPV is considered safe for buildings consisting of engineered concrete and masonry (no plaster) and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction building vibration damage criterion is 0.2 in/sec PPV.

**Table 5.10-5 Construction Vibration Damage Criteria**

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: Transit Noise and Vibration Impact Assessment Manual (FTA 2018).  
PPV = peak particle velocity  
in/sec = inch/inches per second

### 5.10.3 Environmental Impacts

#### 5.10.3.1 METHODOLOGY

This noise evaluation was prepared in accordance with the requirements of CEQA to determine if the Specific Plan would result in significant construction and operational impacts at nearby sensitive receptors. For purposes of CEQA noise impacts do not address noise compatibility of onsite sensitive receptors, however, the City requires projects to be designed to achieve the interior noise standards of Title 24 of the California Green Building Standards Code, which require exterior-interior noise insulation sufficient to achieve acceptable interior noise levels for proposed residential uses.

Construction noise modeling was conducted using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). Construction noise was modeled in terms of  $L_{eq}(8hr)$  from the center of phase A and J as they are the nearest construction phases to off-site sensitive receptors. The center of the phases is used because the metric  $L_{eq}$  is an average. The center of the site represents average noise levels because the equipment will move all around the site and will, on average, be in the center.

Existing traffic noise conditions were modeled using the FHWA Traffic Noise Model Version 2.5 to establish existing conditions based on existing traffic volumes and vehicle mix provided by Fehr & Peers. Traffic noise

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increases were calculated using average daily traffic volumes and comparing existing volumes to future volumes logarithmically for roadway segments in the plan area (Appendix I of this DEIR).<sup>2</sup>

The Plan Area will contain existing residents that will remain onsite during construction of the Project. Because these existing residents are considered part of the environment for CEQA analysis purposes, the Project's operational and construction-related impacts on these residents is analyzed herein.

It is important to note that the purpose of this environmental evaluation is to identify the significant effects of the Specific Plan on the environment (i.e., existing residents), not the significant effects of the environment on the Specific Plan (i.e., future residents). *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478).

#### 5.10.3.2 IMPACT ANALYSIS

The following discussion, *Noise and Land use Compatibility for Future Residences*, is for informational purposes only and analyzes noise and land use compatibility based on existing noise levels in the Plan Area modeled using the FHWA Traffic Noise Model 2.5. The discussion is followed by the noise impact analysis which addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

#### Noise and Land Use Compatibility for Future Residences

Table 5.10-7 demonstrates that existing mobile noise levels range from 52 to 73 dBA  $L_{dn}$ . Further, as discussed above in Section 5.10.1.2, onsite noise measurements published in the Gateway Environmental Impact Report's Noise section (LAHD 2012), indicate that mobile noise levels at the western most boundary of the Specific Plan ranged between 65.6 to 68.8 dBA CNEL. Typical exterior to interior attenuation with doors and windows closed is 25 dBA (USEPA 1974). Therefore, ambient noise levels exceed the interior allowable exposure noise level of 35  $L_{dn}$  dBA from transportation noise sources for land uses in the Plan Area (see Table 5.10-3), and therefore the Plan Area is generally impacted by mobile noise sources. At the discretion of the City of Long Beach, a project applicant may be required to obtain a detailed acoustical report outlining any necessary noise reduction features in the final design to comply with City and State CBC provisions for indoor and outdoor noise levels.

#### *Mobile Noise*

Noise modeling indicates that existing noise levels range from 52 to 73 dBA  $L_{dn}$  at the nearest façade of future proposed residences to existing roadways or freeways. Table 5.10-6 below shows the existing traffic noise levels at various future receptor points exceed the recommended criteria for maximum acceptable interior noise levels for residential uses under the City's Noise Element.

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<sup>2</sup> Project noise increase =  $10 \cdot \log(\text{existing plus project volume} / \text{existing volume})$ ; Cumulative increase =  $10 \cdot \log(\text{future plus project volume} / \text{existing volume})$ .



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Table 5.10-6 Existing Traffic Noise Levels at Future Receptors

Receptor	Exterior Noise Level dBA L <sub>dn</sub>	Interior Noise level <sup>1</sup>	Greater than Recommended Criteria for Maximum Acceptable Residential Noise Levels (35 L <sub>dn</sub> )? <sup>2</sup>
Receiver 1	65	40	Yes
Receiver 2	58	33	No
Receiver 3	54	29	No
Receiver 4	52	27	No
Receiver 5	52	27	No
Receiver 6	70	45	Yes
Receiver 7	73	48	Yes
Receiver 8	70	45	Yes

Source: TNM 2.5. See Appendix H for modeling outputs.

<sup>1</sup> Typical exterior to interior noise attenuation of 25 dBA applied with windows and doors closed.<sup>2</sup> City of Long Beach, Noise Element, 1975.*Rail Noise*

As discussed above in Section 5.10.1.2 *Existing Conditions*, onsite noise measurements published in the Gateway Environmental Impact Report's Noise section (LAHD 2012), indicate that noise levels at the western most boundary of the Specific Plan ranged between 65.6 to 68.8 dBA CNEL. Traffic noise modeling, using the most recent available traffic volumes, found existing volumes to be higher than reported in the 2011 SCIG DEIR. With the typical interior to exterior noise attention with doors and windows closed, interior noise levels would be 43.8 dBA CNEL.<sup>3</sup> Therefore, ambient noise levels exceed the interior allowable exposure noise level of 35 L<sub>dn</sub> dBA from transportation noise sources for land uses in the Plan Area (see Table 5.10-3).

**Impact 5.10-1: Construction activities would result in temporary noise increases in the vicinity of the Plan Area. [Threshold N-1]**

**Impact Analysis:** Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment.

**Construction Noise**

Construction noise would temporarily increase noise levels above the existing ambient levels. The Specific Plan buildout would be phased out over a 10-year construction schedule. Construction related noise was analyzed using the Roadway Construction Noise Model, as mentioned in the Methodology Section above.

*Construction Vehicles*

The transport of workers and materials to and from the construction site would incrementally increase noise levels along site access roadways. Individual construction vehicle pass-bys and haul trucks may create momentary noise levels of up to approximately 85 dBA (L<sub>max</sub>) at 50 feet from the vehicle, but these occurrences

<sup>3</sup> Based on typical exterior to interior attenuation with doors and windows closed is 25 dBA (USEPA 1974).

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would generally be limited to architectural coating and asphalt demolition hauling overlapping phases, and be relatively short lived.

Access to the Plan Area would be directly through Terminal Island Freeway exits and Pacific Coast Highway onto Technology Place. An estimated maximum of approximately 1,740 daily combined construction-related trips (worker and vendor estimated based on Air Quality construction modeling) during overlapping activity phases would result in a noise increase of up to 0.6 dBA when compared to existing traffic volumes along access state routes (Terminal Island Freeway and Pacific Coast Highway), which have corresponding ADT volumes of 11,017 or greater (Fehr & Peers 2020). Accessing the Plan Area through Pacific Coast Highway would involve driving through Technology Place. However, as discussed below in Impact 10.5-2, there are no sensitive receptors along Technology Place.

Haul truck trips would be up to 20 trips per day, an insignificant increase compared to the existing volumes previously mentioned. Noise impacts from construction vehicles would be less than significant as none of the traffic-related thresholds identified above would be exceeded.

#### *Construction Equipment*

Noise generated by on-site construction equipment is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each phase of construction involves different types of equipment and has distinct noise characteristics. Noise levels from construction activities are typically dominated by the loudest several pieces of equipment. The dominant equipment noise source is typically the engine, although work-piece noise (such as dropping of materials) can also be noticeable.

The noise produced at each construction phase is determined by combining the  $L_{eq}$  contributions from the top three loudest pieces of equipment used at a given time, while accounting for the ongoing time-variations of noise emissions (commonly referred to as the usage factor). Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on what specific activity is being performed at any given moment.

Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and diminishes at a rate of at least 6 dBA per doubling of distance (conservatively ignoring other attenuation effects from air absorption, ground effects, and shielding effects), the average noise levels at noise-sensitive receptors could vary considerably, because mobile construction equipment would move around the site (site of each development phase) with different loads and power requirements. The City of Long Beach does not have an established construction noise threshold. Therefore, the FTA criterion of 80 dBA  $L_{eq}$  will be used to determine impact significance at on-site and off-site receptors.

#### *Offsite Receptors*

Noise levels from project-related construction activities were calculated from the top three loudest construction equipment at spatially averaged distances (i.e., from the acoustical center of the closest development phase) to the property line of the nearest receptors. Although construction may occur across the Plan Area, the nearest

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### NOISE

development phase's center of construction area to various sensitive receptors, best represents the potential average construction-related noise levels. Using information provided by the applicant, the expected construction equipment mix was estimated and categorized by construction activity using the FHWA RCNM.

The nearest offsite receptors to development phases are the Cabrillo High School sports fields to the north and Cabrillo High School and Long Beach Job Corps to the east. The sports field are closest to development phase J and the Long Beach Job Corps Center and Cabrillo High School are closest to development phase A. Distances were measured from the center of phase A and J to their respective nearest sensitive receptor's property line. Construction noise was modeled in terms of  $L_{eq}(8hr)$  from the center of phase A and J as they are the nearest construction phases to off-site sensitive receptors. The center of the phases is used because the metric  $L_{eq}$  is an average. The center of the site represents average noise levels because the equipment will move all around the site and will, on average, be in the center. The associated, aggregate sound levels—grouped by construction activity—are summarized in Table 5.10-7, *Off-site Project Related Construction Noise* (see Figure 3-3, *Aerial Photograph* for surrounding off-site receptors).

As shown in Table 5.10-7, construction activities would not exceed the 80 dBA  $L_{eq}$  threshold at sensitive receptors outside the Plan Area. Therefore, temporary construction related noise impacts would be less than significant to off-site receptors.

**Table 5.10-7 Off-site Project-Related Construction Noise, dBA  $L_{eq}$**

Construction Activity Phase	RCNM output noise level (50 feet)	Noise Level at Job Corps from Phase A (100 feet)	Noise Level at Cabrillo High from Phase A (300 feet)	Noise Level at Cabrillo High Play Fields from Phase J (120 feet)
Building Demolition	83	77	67	75
Site Preparation	85	79	69	77
Rough Grading	85	79	69	77
Extra Foundation Preparation	82	76	67	75
Utility Trenching	80	74	64	72
Building Construction	83	76	67	75
Architectural Coating	74	68	58	66
Asphalt Demolition	85	79	70	78
Asphalt Paving	85	79	70	78
Fine Grading	85	79	69	77
Finish/Landscaping	68	62	52	60

Notes: Calculations performed with the FHWA's RCNM software are included in Appendix H.

#### *Onsite Receptors*

Onsite sensitive receptors within the plan area would experience noise levels greater than 80 dBA  $L_{eq}$  due to the proximity of construction activities to existing residential and the future residential uses built prior to full buildout of the Specific Plan. Construction would occur within 50 feet of existing onsite residential receptors where maximum  $L_{eq}$  noise levels could reach up to 85 dBA (see Table 5.10-7). Due to proximity of construction activities to onsite sensitive receptors and ongoing exposure over 80 dBA  $L_{eq}$ , impacts to onsite residential uses and future residential uses would be significant.

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**Impact 5.10-2 Implementation of the Specific Plan would result in long-term operation-related noise that would not exceed local standards. [Threshold N-1]**

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#### *Impact Analysis:*

##### Mobile Noise

To determine the traffic noise level increase due to the project, the existing average daily traffic (ADT) volumes were compared to the existing plus project ADT volumes. Table 5.10-8, *Project-Related Traffic Noise Increase*, summarizes project-related traffic noise increases. As stated above an impact would occur if the implementation of the Specific Plan would result in a traffic noise increase of the following at roadway segments with adjacent noise-sensitive receptors:

- Greater than 1.5 dBA increase for ambient noise environments of 65 dBA CNEL and higher;
- Greater than 3 dBA increase for ambient noise environments of 60–64 CNEL; and
- Greater than 5 dBA increase for ambient noise environments of less than 60 dBA CNEL

There are two segments that would experience a traffic noise increase greater than 1.5 dBA CNEL, Technology Place – south of 20th Street and Technology Place – north of Pacific Coast Highway. However, there are no sensitive receptors adjacent to these roadway segments (see Figure 3-3, *Aerial Photograph*). Therefore, noise increase along these segments would not result in a significant impact. Therefore, noise increase along these segments would not result in a significant impact.

Existing on-site sensitive receptors would be influenced primarily by traffic noise levels from Terminal Island Freeway. The nearest onsite existing receptor to Terminal Island Freeway is Receptor 7, approximately 100 feet from the nearest roadway center lane (see Figure 5.10-1). Existing noise levels at this receptor is 73.4 dBA. As seen in Table 5.10-8, the project-related traffic noise increase along Terminal Island Freeway would be 0.3 dBA with a cumulative decrease of -1.2 dBA south of Willow Street. A 0.3 dBA increase would be less than significant, and noise levels overall would decrease under cumulative conditions.

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Table 5.10-8 Project-Related Traffic Noise Increase

Roadway Segment	Traffic Volumes (ADT)				Traffic Noise Increase (dBA CNEL)		
	Existing	Existing Plus Project	2040 No Project	2040 With Project	Project Noise Increase	Cumulative Noise Increase	Cumulative Noise Increase due to Project
Alameda Street - north of connector to Sepulveda Boulevard	22,626	23,166	20,930	21,470	0.1	-0.2	0.1
Alameda Street - south of connector to Sepulveda Boulevard	17,138	17,388	17,510	430	0.1	-16.0	-16.1
Connector to Sepulveda Boulevard - east of Alameda Street	8,161	8,451	6,140	6430	0.2	-1.0	0.2
Connector to Alameda Street - north of Sepulveda Boulevard	5,028	5,322	2,940	3,230	0.2	-1.9	0.4
Connector to Alameda Street - south of Sepulveda Boulevard	440	440	430	430	0.0	-0.1	0.0
Sepulveda Boulevard - east of connector to Alameda Street	10,534	11,004	7,860	8,330	0.2	-1.0	0.3
Sepulveda Boulevard - west of connector to Alameda Street	9,488	9,672	8,970	9,150	0.1	-0.2	0.1
Terminal Island Fwy - north of Willow Street	41	41	40	40	0.0	-0.1	0.0
Terminal Island Fwy - south of Willow Street	8,763	9,383	6,080	6,700	0.3	-1.2	0.4
Willow Street - Terminal Island Fwy to Santa Fe Avenue	14,710	14,880	15,040	15,210	0.0	0.1	0.0
Willow Street - west of Terminal Island Fwy	16,250	16,700	13,720	14,170	0.1	-0.6	0.1
Santa Fe Avenue - north of Willow Street	18,219	18,399	18,720	18,900	0.0	0.2	0.0
Santa Fe Avenue - south of Willow Street	16,974	17,334	17,450	17,810	0.1	0.2	0.1
Willow Street - east of Santa Fe Avenue	23,340	23,690	23,850	24,200	0.1	0.2	0.1
Alameda Street - north of O Street	13,777	14,027	13,390	13,640	0.1	0.0	0.1
Alameda Street - south of O Street	10,046	10,116	10,250	10,320	0.0	0.1	0.0
O Street - east of Alameda Street	7,205	7,525	6,680	7,000	0.2	-0.1	0.2
O Street - north of Pacific Coast Highway	7,299	7,611	6,790	7,100	0.2	-0.1	0.2
Pacific Coast Highway - east of O Street	21,314	21,804	21,280	21,770	0.1	0.1	0.1
Pacific Coast Highway - west of O Street	23,574	23,756	24,270	24,450	0.0	0.2	0.0
San Gabriel Avenue - south of SR-103 NB Ramps	3,404	4,374	4,470	5,440	1.1	2.0	0.9
SR-103 NB Ramps - west of San Gabriel Avenue	3,107	3,551	4,150	4,590	0.6	1.7	0.4
Technology Place - south of Pacific Coast Highway	2,328	2,398	2,440	2,510	0.1	0.3	0.1

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**Table 5.10-8 Project-Related Traffic Noise Increase**

Roadway Segment	Traffic Volumes (ADT)				Traffic Noise Increase (dBA CNEL)		
	Existing	Existing Plus Project	2040 No Project	2040 With Project	Project Noise Increase	Cumulative Noise Increase	Cumulative Noise Increase due to Project
Pacific Coast Highway - Technology Place to Santa Fe Avenue	23,986	26,196	23,420	25,630	0.4	0.3	0.4
Pacific Coast Highway - west of Technology Place	23,889	24,654	23,270	24,030	0.1	0.0	0.1
Santa Fe Avenue - north of Pacific Coast Highway	11,801	12,143	12,120	12,460	0.1	0.2	0.1
Santa Fe Avenue - south of Pacific Coast Highway	9,238	9,308	9,590	9,660	0.0	0.2	0.0
Pacific Coast Highway - Santa Fe Avenue to Harbor Avenue	21,777	23,577	21,220	23,020	0.3	0.2	0.4
Harbor Avenue - north of Pacific Coast Highway	5,263	5,264	5,410	5,410	0.0	0.1	0.0
Harbor Avenue - south of Pacific Coast Highway	2,981	3,091	3,070	3,180	0.2	0.3	0.2
Pacific Coast Highway - Santa Fe Avenue to Harbor Avenue	30,760	32,450	30,500	32,190	0.2	0.2	0.2
Magnolia Avenue - north of Pacific Coast Highway	7,486	7,594	7,750	7,860	0.1	0.2	0.1
Magnolia Avenue - south of Pacific Coast Highway	8,073	8,143	8,440	8,510	0.0	0.2	0.0
Pacific Coast Highway - east of Magnolia Avenue	26,375	26,665	27,170	27,460	0.0	0.2	0.0
Pacific Coast Highway - west of Magnolia Avenue	27,160	27,627	28,100	28,570	0.1	0.2	0.1
Santa Fe Avenue – south of Willard Street	13,763	14,073	14,136	14,446	0.1	0.2	0.1
Pacific Coast Highway – east of O Street	26,099	26,555	26,839	27,295	0.1	0.2	0.1
Terminal Island Fwy – south of Pacific Coast Highway	11,017	11,115	12,948	13,046	0.0	0.7	0.0
Technology Place - south of 20th Street <sup>1</sup>	869	2,979	990	3,100	5.4	5.5	5.0
Technology Place - north of Pacific Coast Highway <sup>1</sup>	1,059	3,164	1,190	3,290	4.8	4.9	4.4

Source: Traffic data provided by Fehr and Peers, 2020.

<sup>1</sup> Indicates roadway segments resulting in a noise increase greater than 1.5 dBA CNEL. However, there are no sensitive receptors along these roadway segments.

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### Stationary Sources

Heating, ventilation, and air conditioning (HVAC) systems are anticipated to be on the rooftop of proposed buildings. In accordance with LBMC Section 8.80.200(N), HVAC equipment shall not exceed 55 dBA, at any point on neighboring property line, five feet above grade level, no closer than three feet from any wall.

The nearest sensitive receptors would be the adjacent Cabrillo High School and Long Beach Job Corps to the east, and residential uses to the north off West Hill Street. Typical HVAC equipment noise levels are approximately 72 dBA at a distance of 3 feet. The nearest receptors range between 25 feet (adjacent receptors) and 1,300 feet (residential receptors), as measured from the nearest façade of the proposed buildings to the sensitive receptor property line. Noise levels would attenuate to 54 dBA and 20 dBA at these locations, respectively. The Specific Plan would also include building parapet walls that would provide additional shielding and noise attenuation to the adjacent sensitive receptors. HVAC mechanical equipment noise would not exceed 55 dBA at the property line of the receiving receptors. Therefore, impacts would be less than significant.

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**Impact 5.10-3: Implementation of the Specific Plan would create short-term groundborne vibration that could exceed standards. [Threshold N-2]**

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#### *Impact Analysis:*

### Architectural Vibration Damage

Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures.

Table 5.10-9 summarizes FTA vibration levels for typical construction equipment at a reference distance of 25 feet. Typical construction equipment can generate vibration levels ranging up to 0.21 in/sec PPV at 25 feet. Vibration levels at a distance greater than 25 feet would attenuate 0.2 in/sec PPV or less. In addition to reference levels from the FTA, the Specific Plan proposes to use a piece of equipment called vibroflot during construction. A vibroflot is a piece of equipment used for ground improvement purposes and uses a technique called “vibro compaction” or “vibroflotation”. Vibration levels at approximately 25 feet range from 0.035 to 0.445 in/sec PPV (Hamidi, Varaksin, & Nikraz, 2011).<sup>4</sup>

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<sup>4</sup> Source study provided vibration levels in millimeters per second (mms) ranging from 0.9 mm/sec PPV, to approximately 10.5 mm/sec PPV.

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**Table 5.10-9 Vibration Levels for Typical Construction Equipment**

Equipment	PPV (in/sec) at 25 feet	Offsite PPV (in/sec) at 175 feet
Vibratory Roller	0.21	0.011
Clam shovel	0.20	0.011
Hoe Ram	0.089	0.005
Large Bulldozer	0.089	0.005
Caisson Drilling	0.089	0.005
Loaded Trucks	0.076	0.004
Jackhammer	0.035	0.002
Small Bulldozer	0.003	<0.001

Source: FTA, 2018. *Transit Noise and Vibration Impact Assessment*, September.

#### ***Off-site Receptors***

The nearest structure to construction activities is the portable classrooms to the northeast of development phase A, at approximately 175 feet. At that distance, vibration generated by construction activity would be up to 0.024 in/sec PPV. Vibration levels would not exceed the 0.20 in/sec PPV threshold. Therefore, impacts would be less than significant.

#### ***On-site Receptors***

Some existing structures within the Plan Area would be within 25 feet of construction and demolition activities. Due to proximity of construction activities and proposed use of a vibroflot, vibration levels could exceed the 0.20 in/sec PPV threshold. Therefore, impacts would be potentially significant to existing and future on-site structures.

### **Operational Vibration Sources**

The operation of the Specific Plan would not include any substantial long-term vibration sources. Thus, no significant vibration effects from operations sources would occur.

## **5.10.4 Cumulative Impacts**

### **Construction Noise**

The nearest related project to the project site is CVC Phase VI. CVC Phase VI is a separate project from the Century Villages at Cabrillo Specific Plan, to be completed before Project construction activities would occur. There are no other cumulative development projects in the area which could combine with construction of the Specific Plan to result in a cumulatively considerable impact. Therefore, no significant cumulative construction noise impacts are anticipated.

### **Mobile Noise**

A significant cumulative traffic noise increase would be identified if the Specific Plan's contribution to the Cumulative Plus Project condition were calculated to be 1 dBA or more. That is, if a cumulative traffic noise



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### NOISE

increase greater than the 1.5, 3, or 5 dBA CNEL was exceeded and the relative contribution from project traffic is calculated to contribute 1 dBA or more, then this would be considered cumulatively considerable. As shown in Table 5.10-8, a cumulative traffic noise increase of greater than 1.5 dBA CNEL would occur along two roadway segments and the Specific Plan contribution would be 1 dBA or more. However, there are no sensitive receptors along those roadway segments. As discussed above and shown in Table 5.8, there would be a cumulative noise decrease along the nearest roadway segment (Terminal Island Freeway – south of Willow Street). Therefore, the Specific Plan would result in a less than significant cumulative impact to both onsite and offsite receptors.

### 5.10.5 Existing Regulations

- California Building Code, Title 24, Part 2, Volume 1, Chapter 12, Interior Environment, Section 1207.11.2, *Allowable Interior Noise Levels*.
- Chapter 8.80, *Noise*

### 5.10.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impact would be less than significant: Impact 5.10-2.

Without mitigation, the following impacts would be **potentially significant**:

- **Impact 5.10-1** Temporary construction activities would elevate the existing noise ambient exposing existing and future residences at Century Villages at Cabrillo above 80 dBA  $L_{eq}$  noise levels.
- **Impact 5.10-3** Temporary construction activities could generate vibration levels in excess of 0.20 in/sec PPV, potentially causing architectural damage to existing and future structures at Century Villages at Cabrillo.

### 5.10.7 Mitigation Measures

#### Impact 5.10-1

N-1 Prior to issuance of demolition, grading and/or building permits, the project applicant shall incorporate the following practices into the construction contract agreement to be implemented by the construction contractor during the entirety of all construction phases:

- Per Section 8.80.202 of the Long Beach Municipal Code, construction activity is limited to the hours of 7:00 AM to 7:00 PM on Monday through Friday (including federal holidays), and 6:00 PM to 9:00 AM on Saturdays. Construction is prohibited on Sundays. If construction outside of these hours is necessary, special permits are required and must be issued by the City.

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- 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, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.
- Require that impact tools (e.g., jack hammers and hoe rams) be 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, wherever feasible.
- Stationary equipment such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.
- Stockpiling shall be located as far as feasible from nearby noise-sensitive receptors.
- 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 and residences at Century Villages at Cabrillo, 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.
- 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.
- 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.
- Erect temporary noise barriers, where feasible, when construction noise is predicted to exceed the noise standard after other measures have been considered, or occur at nighttime, or when the anticipated construction duration is greater than is typical (e.g., two years or more).

#### Impact 5.10-3

N-2

Prior to issuance of a building permit for any project requiring construction within 25 feet of an existing structure, the property owner/developer shall prepare a vibration analysis to assess and mitigate potential vibration impacts related to construction activities. Where construction

## 5. Environmental Analysis

### NOISE

equipment operates within the distances shown in Table 5.10-10 of a sensitive receptor, project owner/developer must utilize best efforts to minimize duration and maximize distance between equipment and existing building. Exceeding these distances shown in the third column of the table would result in vibration levels greater than 0.20 in/sec PPV.

**Table 5.10-10 Vibration Levels for Typical Construction Equipment**

Equipment	Distance at which threshold is exceeded (feet)	PPV in/sec at minimum distance allowable
Vibratory Roller	25	0.20
Clam shovel	15	0.19
Hoe Ram	15	0.19
Large Bulldozer	15	0.19
Caisson Drilling	13.5	0.19
Loaded Trucks	8	0.19
Jackhammer	1.5	0.20
Small Bulldozer	25	0.20
Vibroflot <sup>1</sup>	42	0.20

Sources: FTA, 2018. *Transit Noise and Vibration Impact Assessment*, September and Hamidi, Varaksin, & Nikraz, 2011

<sup>1</sup> Maximum reference of 0.445 use to determine minimum allowable distance between receptor and equipment operation.

### 5.10.8 Level of Significance After Mitigation

#### Impact 5.10-1

Construction noise would elevate existing noise levels above 80 dBA  $L_{eq}$  to onsite existing and future residences. Mitigation measures, as provided above, would provide noise attenuation to sensitive receptors. However, demolition and construction activities are proposed to adjacent to residential buildings, and though construction is temporary, it would be phased over a 10-year period. Provided the limitation of attenuation that mitigation measures provide, specifically to upper level dwelling units to multi-story residential buildings, impacts would remain significant and unavoidable.

#### Impact 5.10-3

Adhering to the screening distances provided in Table 5.10-10, in tandem with a vibration analysis, would reduce potential impacts associated with vibration. However, due to the nature of infill development and the proximity of new development to existing structures strict adherence to the screening distances is not possible in all cases. In those instances, the owner/developer must utilize best efforts to minimize duration and maximize distance between equipment and existing building. Impacts would remain significant and unavoidable.

### 5.10.9 References

California Department of Transportation (Caltrans). 2011a. Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects.

2013a, September. Technical Noise Supplement ("TeNS").

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### 5.11 POPULATION AND HOUSING

This section of the Draft Environmental Impact Report (DEIR) examines the potential for socioeconomic impacts of the Century Villages at Cabrillo Specific Plan (Specific Plan on the City of Long Beach, including changes in population, employment, and demand for housing, particularly housing cost/rent ranges defined as *affordable*.

#### 5.11.1 Environmental Setting

##### 5.11.1.1 REGULATORY BACKGROUND

Federal, state, and local laws, regulations, plans, and guidelines related to population and housing that are applicable to the Specific Plan are summarized below.

##### Federal

###### *US Census*

The United States Bureau of the Census publishes population, household, and employment data gathered through the decennial census, which provides a record of historical growth rates in Los Angeles County and the City. The most recent decennial census was in 2010, and these data are used, when available, for analysis in this section of this DEIR. Data from the 2000 Census were also used for historical reference in evaluating demographic trends.

##### State

###### *California Planning and Zoning Law*

California planning and zoning law requires each city and county to adopt a general plan for future growth (California Government Code (GOV) § 65300). This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. The State Housing and Community Development Department (HCD) estimates the relative share of California's projected population growth that would occur in each county based on California Department of Finance population projections and historical growth trends. These figures are compiled by HCD in a Regional Housing Needs Assessment (RHNA) for each region of California. Where there is a regional council of governments, the HCD provides the RHNA to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares gives cities and counties the opportunity to comment on the proposed allocations. The HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing need.

The State of California requires each city and county to identify and analyze existing and projected housing needs within its jurisdiction and prepare goals, policies, and programs to further the development, improvement, and preservation of housing for all economic segments of the community, commensurate with local housing needs (GOV §§ 65580-65589).

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### POPULATION AND HOUSING

#### *Housing Accountability Act*

The Housing Accountability Act (HAA) was passed in 1982, empowering the State of California to limit the ability of local government to restrict the development of new housing. Specifically, the HAA prohibits a local agency from disapproving, or conditioning approval in a manner that renders infeasible, a housing development project for very low, low-, or moderate-income households or an emergency shelter unless the local agency makes specified written findings based on substantial evidence in the record. The HAA was strengthened by its amendment in 2017 under Assembly Bill 678 and Senate Bill 167, discussed below.

#### ***Amendment to the Housing Accountability Act***

Assembly Bill 678 (AB 678) and Senate Bill 167 (SB 167), both passed in 2017, amends the HAA by increasing the documentation and standard of proof required for a local agency to legally defend its denial of housing development projects. The amendments under these bills require the findings of the local agency to instead be based on a preponderance of the evidence in the record. For example, if the local agency considers the housing development project to be inconsistent, not in compliance, or not in conformity with both the jurisdiction's zoning ordinance and general plan land use designation, the local agency is required to provide the applicant with written documentation identifying the provision or provisions, and an explanation of the reason or reasons it considers the housing development to be inconsistent, not in compliance, or not in conformity within specified time periods. If the local agency fails to provide this documentation, these bills provide that the housing development project would be deemed consistent, compliant, and in conformity with the applicable plan, program, policy, ordinance, standard, requirement, or other similar provision.

#### *Housing Crisis Act*

Senate Bill 330 (SB 330), or the Housing Crisis Act of 2019, was passed in October 2019 to address California's housing shortage by expediting the approval process for housing development of all types, particularly in urbanized areas. To address the crisis, this bill prohibits some local discretionary land use controls currently in place and generally requires cities to approve all housing developments that comply with current zoning codes and general plans. SB 330 requires that a housing development project only be subject to the ordinances, policies, and standards adopted and in effect when a preliminary application is submitted, notwithstanding the provisions of the HAA or any other law, subject to certain exceptions. The passage of SB 330 included amendments to the HAA, Planning and Zoning Law, and Permit Streamlining Act, setting new provisions statewide for housing development projects.

### Regional

#### *Southern California Association of Governments*

The Southern California Association of Governments (SCAG) is a regional council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties, which encompass over 38,000 square miles. SCAG is the federally recognized metropolitan planning organization (MPO) for this region and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed

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### POPULATION AND HOUSING

development and infrastructure projects to analyze their impacts on regional planning programs. As the Southern California region's MPO, SCAG cooperates with the South Coast Air Quality Management District, the California Department of Transportation, and other agencies in preparing regional planning documents.

#### ***Regional Transportation Plan/Sustainable Community Strategy***

SCAG has developed regional plans to achieve specific regional objectives. On September 3, 2020, SCAG adopted the 2020-2045 RTP/SCS (referred to as "Connect SoCal") and its associated Program EIR on September 3, 2020. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern (SCAG 2020a). A component of Connect SoCal is a set of growth forecasts that estimates employment, population, and housing growth (SCAG 2020b). These estimates are used by SCAG, transportation agencies, and local agencies to anticipate and plan for growth.

This long-range plan, which is a requirement of the state of California and the federal government, is updated by SCAG every four years as demographic, economic, and policy circumstances change. Project consistency analysis for goals outlined in Connect SoCal is provided below.

#### **Local**

Development of housing in the City is guided by the goals, objectives, and policies of the Long Beach General Plan Land Use and Housing Elements. The Long Beach General Plan Housing Element includes the following goals relating to housing:

- Goal 1: Provide Housing Assistance and Preserve Publicly Assisted Units
- Goal 2: Address the Unique Housing Needs of Special Needs Residents
- Goal 3: Retain and Improve the Quality of Existing Housing and Neighborhoods
- Goal 4: Provide Increased Opportunities for the Construction of High-Quality Housing
- Goal 5: Mitigate Government Constraints to Housing Investment and Affordability
- Goal 6: Provide Increased Opportunities for Home Ownership
- Goal 7: Ensure Fair and Equal Housing Opportunity

#### **5.11.1.2 EXISTING CONDITIONS**

##### **US Census Data**

The United States Bureau of the Census publishes population, household and employment data gathered through the decennial census. The most recent Census was conducted in 2010 ("2010 Census"). The American Community Survey (ACS) is a nationwide survey published by the United States Bureau of the Census designed to give communities more frequent overviews of how they are changing. The ACS

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eliminated the need for a decennial census long form in 2010. The ACS collects long form type information (e.g., employment, migration, educational attainment, veteran status, etc.) throughout the decade, publishing statistics yearly rather than only once every 10 years. The ACS produces demographic, social, housing, and economic statistics in the form of 1- and 5-year estimates based on population thresholds. The strength of the ACS is in estimating characteristic distributions. Tables 5.11-1 and 5.11-2 show historical population and housing trends, respectively, for the City and Los Angeles County.

**Table 5.11-1 Historical Population Trends**

Year	City of Long Beach		Los Angeles County	
	Population	Percent Change	Population	Percent Change
2010	461,823	--	9,758,256	--
2011	462,197	+0.08%	9,787,747	+0.30%
2012	463,589	+0.30%	9,840,024	+0.53%
2013	465,424	+0.40%	9,893,481	+0.54%
2014	468,594	+0.68%	9,974,203	+0.82%
2015	470,237	+0.35%	10,038,388	+0.64%
2016	469,793	-0.09%	10,057,155	+0.19%
2017	470,489	+0.15%	10,105,722	+0.48%
2018	468,883	-0.34%	10,098,052	-0.08%

Source: US Census Bureau 2018a.

**Table 5.11-2 Historical Housing Trends**

Year	City of Long Beach		Los Angeles County	
	Housing Units	Percent Change	Housing Units	Percent Change
2010	175,732	--	3,425,736	--
2011	176,188	+0.26%	3,437,584	+0.35%
2012	174,259	-1.09%	3,441,416	+0.11%
2013	175,755	+0.86%	3,452,901	+0.33%
2014	174,603	-0.66%	3,462,075	+0.27%
2015	174,742	+0.08%	3,476,718	+0.42%
2016	173,040	-0.97%	3,490,118	+0.39%
2017	173,741	+0.41%	3,506,903	+0.48%
2018	175,235	+0.86%	3,524,321	+0.50%

Source: US Census Bureau 2018b.

Table 5.11-3 shows the City's total workforce over 16 years by occupation and industry based on the City's 5-year estimates from 2014 to 2018. As shown in the table, the City had an employed civilian labor force of 227,972 persons. The three largest occupational categories between 2014 and 2018 include educational services, and health care and social assistance (22.57 percent); professional, scientific, and management, and administrative and waste management services (12.28 percent); and arts, entertainment, and recreation, and accommodation and food services (11.41 percent). These occupational categories comprise approximately 46 percent of the total work force in Long Beach.



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POPULATION AND HOUSING**Table 5.11-3 City of Long Beach Employment Industry by Occupation**

Industry / Occupation	Number	Percent
Agriculture, forestry, fishing and hunting, and mining	1,165	0.51%
Construction	11,547	5.07%
Manufacturing	22,412	9.83%
Wholesale Trade	6,809	2.99%
Retail Trade	22,163	9.72%
Transportation and warehousing, and utilities	17,847	7.83%
Information	5,667	2.49%
Finance and insurance, and real estate and rental and leasing	13,771	6.04%
Professional, scientific, and management, and administrative and waste management services	27,999	12.28%
Educational services, and health care and social assistance	51,450	22.57%
Arts, entertainment, and recreation, and accommodation and food services	26,002	11.41%
Other services, except public administration	11,803	5.18%
Public Administration	9,337	4.10%
<b>TOTAL</b>	<b>227,972</b>	<b>100%</b>

Source: US Census Bureau 2018c.

**Southern California Association of Governments**

Table 5.11-4 summarizes SCAG's Connect SoCal growth projections to the year 2045 for both the City and Los Angeles County.

**Table 5.11-4 SCAG Population, Households and Employment Projections**

Jurisdiction	2016	2045	Increase	Percent Change
Population				
City of Long Beach	470,900	489,600	18,700	4.0%
Los Angeles County	10,110,000	11,674,000	1,564,000	15.5%
Households				
City of Long Beach	168,600	198,200	29,600	17.6%
Los Angeles County	3,319,000	4,119,000	800,000	24.1%
Housing Units <sup>1</sup>				
City of Long Beach	177,030	208,110	31,080	17.6%
Los Angeles County	3,484,950	4,324,950	840,000	24.1%
Employment				
City of Long Beach	155,900	185,400	29,500	18.9%
Los Angeles County	4,743,000	5,382,000	639,000	13.5%

Source: SCAG 2020.

<sup>1</sup> Housing units in SCAG projections are estimated based on number of households plus a healthy vacancy rate of 5 percent.*Jobs-Housing Ratio*

The jobs-housing ratio is a general measure of the number of jobs as compared to housing in a defined geographic area, without regard to economic constraints or individual preferences. The jobs-housing ratio as

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### POPULATION AND HOUSING

well as the type of jobs versus the price of housing, has implications for mobility, air quality, and the distribution of tax revenues. A project's effect on the jobs-housing ratio is one indicator of how it will affect growth and quality of life in the project area. SCAG applies the jobs-housing ratio at the regional and subregional levels in order to analyze the fit between jobs, housing, and infrastructure. Though SCAG's regional planning efforts has been to improve this balance, jobs-housing goals and ratios are only advisory, and no jobs-housing ratios have been adopted in state, regional, or city policies. The American Planning Association (APA), an authoritative resource for community planning best practices, includes recommendations for assessing jobs-housing ratios, with a recommended target of 1.5 and a recommended range of 1.3 to 1.7 (Weltz 2003).

As shown in Table 5.11-5, the City is below the recommended jobs-housing ratio target of 1.5 and is anticipated to increase by 1.1 percent between 2016 and 2045. Los Angeles County overall is near the recommended range for the jobs-housing ratio but anticipated to decrease by 8.8% by the year 2045.

**Table 5.11-5 Jobs-Housing Ratio**

	2016	2045	Percent Change
City of Long Beach	0.88	0.89	1.1%
Los Angeles County	1.36	1.24	-8.8%

Based on values in Table 5.11-4. Calculated by Employment / Housing Units.

### Regional Housing Needs Assessment (RHNA)

SCAG is the regional planning agency responsible for allocating RHNA to jurisdictions within its region. As shown in Table 5.11-6, the City's RHNA allocation for the 2014-2021 planning period is 7,048 housing units. According to the City's 2018 Annual Housing Element Progress Report, which reports the City's progress towards meeting its RHNA target, the City processed 132 very low-income housing units, 179 low-income housing units, 7 moderate-income housing units, and 1,712 above moderate-income housing units in 2018 (Tatum 2019).<sup>1</sup>

**Table 5.11-6 City of Long Beach Regional Housing Needs Assessment Allocation (2014-2021)**

Income Category	Number of Units	Percent
Extremely Low Income (up to 30% of AMI)	886	12%
Very Low Income (31% to 50% of AMI)	887	13%
Low Income (51% to 80% of AMI)	1,066	15%
Moderate Income (81% to 120% of AMI)	1,170	17%
Above Moderate Income (more than 120% of AMI)	3,039	43%
<b>TOTAL</b>	<b>7,048</b>	<b>100%</b>

Source: City of Long Beach 2014.

Note: AMI = Area Median Income

<sup>1</sup> Includes housing units that are in the building entitlement phase, building permit phase, and certificate of occupancy phase.

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### 5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- P-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- P-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The Initial Study, included as Appendix A, establishes that impacts associated with the following thresholds would be less than significant:

- Threshold P-2

This impact will not be addressed in the following analysis.

### 5.11.3 Environmental Impacts

#### 5.11.3.1 IMPACT ANALYSIS

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.11-1: Implementation of the Specific Plan would not induce unplanned substantial population growth in in the City of Long Beach either directly or indirectly. [Threshold P-1]**

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**Impact Analysis:** The Specific Plan's potential impacts on population and housing during short-term construction and long-term building operation is analyzed below.

#### Construction

The Specific Plan would be developed in phases over a ten-year period with final buildout anticipated in 2033. Construction activities of individual development projects that would be accommodated by the Specific Plan would require contractors and laborers. It is anticipated that general construction labor would be available from the local and regional labor pool and would not result in substantial population growth because the construction workers would commute from their respective homes. Additionally, each construction phase (e.g. demolition, grading, pouring foundations, electrical etc.) requires different skills and specialties, which would be needed for the length of time of that phase. Therefore, the Specific Plan's construction phases would not result in a long-term increase in employment from short-term construction activities. Construction of additional housing for construction workers would not be necessary, and no additional infrastructure

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construction would be provided. Therefore, the Specific Plan would not directly or indirectly induce substantial population growth in the City during construction.

#### Operation

##### *Direct Impacts*

The Plan Area currently contains 865 dwelling units. The units are housed within a combination of one and two-story rehabilitated Naval housing and new one-, two-, three-, four- and five-story residential buildings, some of which are built over enclosed garages that are lined with ground floor functions including service providers and community spaces. The existing housing and support facility buildings provide transitional and permanent housing and support services to the homeless veterans and the homeless population in the City.

Implementation of the Specific Plan involves demolition of 235 existing dwelling units and construction of 750 new dwelling units, for a net increase of 515 dwelling units. At full buildout of the Specific Plan, the Plan Area would consist of a total of 1,380 dwelling units, as shown in Table 3-1, *Summary of Proposed Land Uses*, of Chapter 3, *Project Description*. For this analysis the net new dwelling units were used to determine the new residents in the Plan Area. Assuming an average household size of 2.8 residents per unit, consistent with the household size reported in the General Plan Housing Element, and assuming that all 515 net new dwelling units would generate new residents, the Specific Plan would generate 1,442 new residents in the City. Table 5.11-7 shows the Specific Plan's impact on the City's population and housing projections under existing (2018) and buildout (2033) conditions. This analysis is conservative because it uses the average household size for the City and the actual household size for this community would likely be less. Additionally, since the Plan Area currently operates as a residential community, it is anticipated that a portion of the new dwelling units would be occupied by existing residents of the Plan Area.

In addition, the Specific Plan would result in construction of 17,000 square feet of net new commercial and retail space, 15,000 square feet of education space, and 48,000 square feet of services/administration space, which results in a net increase of 17,000 square feet, 4,800 square feet, 40,750 square feet, respectively. The non-residential units are expected to generate approximately 267 employees.

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POPULATION AND HOUSING**Table 5.11-7 Estimated Population and Housing Growth in Long Beach with Specific Plan Buildout**

	Existing (2018) <sup>1</sup>	Buildout Year (2033) Without Specific Plan <sup>2</sup>	Specific Plan (Net New development)	Existing (2018) Plus Specific Plan	Buildout Year (2033) Plus Specific Plan	SCAG Growth Projections (2045)
<b>Population</b>	468,883	480,572	1,442	470,325	482,014	489,600
<b>Housing Units</b>	175,235	193,106	515	175,750	193,621	208,110
<b>Employment</b>	159,307 <sup>3</sup>	171,159	267 <sup>4</sup>	159,574	171,426	185,400
<b>Jobs-Housing Ratio</b>	0.91	0.88	--	0.91	0.89	0.89

<sup>1</sup> Values are from Tables 5.11-1 and 5.11-2.<sup>2</sup> These values are prorated from SCAG's demographic data contained in Table 5.11-4.<sup>3</sup> This value is prorated from SCAG's demographic data contained in Table 5.11-4.

<sup>4</sup> 66,970 sf amenities\*1 employee/588 sf = 114 employees  
 4,800 sf educational uses\*1 employee/1,587 sf = 3 employees  
 17,000 sf commercial/retail uses\*1 employee/383 sf = 44 employees  
 40,750 sf administrative and supportive services\*1 employee/383 sf = 106 employees  
 Total employees = 267 employees

Based on Community Retail employee generation rate of 1 employee/383 square feet for the Specific Plan's commercial/retail and administration/services components; Neighborhood Retail rate of 1 employee/588 square feet for amenities; and the High School employee generation rate of 1 employee/1,587 square feet for educational uses (USGBC 2008). Calculations are based on the Specific Plan's net increase in floor area.

Under both existing and buildout conditions, the increase in population and housing under the Specific Plan would be within the anticipated growth projections for the City based on SCAG's growth projections (see Table 5.11-7, above).

As shown in Table 5.11-7, the City has a jobs-housing ratio of 0.91 (existing) and 0.89 (buildout), which is below the recommended jobs-housing ratio range of 1.3 to 1.7. As demonstrated in Table 5.11-7, these ratios are unchanged by implementation of the Specific Plan. Under SCAG's 2045 Projections, the City would have a jobs-housing ratio of 0.89. Development consistent with the Specific Plan would contribute to new residential units and non-residential floor area onsite resulting in a jobs-housing ratio of 0.91 under existing plus project conditions and 0.89 at project building, which is consistent with SCAG's projections of 0.89 in the year 2045. Therefore, the Specific Plan would contribute to the City reaching the recommended jobs-housing ratio range of 1.3 to 1.7. Additionally, the Specific Plan provides housing and services for homeless and homeless veteran populations and contributes to the City's overall housing and employment opportunities.

Implementation of the Specific Plan would result in a substantial and unplanned level of growth if estimated development would exceed local or regional population growth projections. Since the growth generated by the Specific Plan is within SCAG's Connect SoCal anticipated growth projections for the City through 2045, implementation of the Specific Plan would not result in substantial unplanned population growth.

Additionally, the Long Beach General Plan's 2019 Land Use Element Regional-Serving Facility PlaceType designation of the Plan Area applies to sites and areas in the City that serve a unique role, or population, that reaches beyond local concerns. The Century Villages at Cabrillo serves a unique role and population. The increase in housing units and population due to additional residential development in the Plan Area was considered and analyzed in the 2019 Final Recirculated EIR (SCH No. 2015051054) for the Long Beach General Plan's 2019 Land Use Element. As concluded in the 2019 Final Recirculated EIR, the increases in

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### POPULATION AND HOUSING

population and housing due to buildout (which included additional residential development in the Plan Area) of the 2019 Land Use Element compared to SCAG's regional forecasts would not result in a substantial adverse impact.

Furthermore, implementation of the Specific Plan would help carry out key goals of the Long Beach General Plan Housing Element by developing residential units that offer additional housing opportunities in the City for a unique population. Specifically, the Specific Plan would provide additional transitional and permanent housing and support services to the homeless veterans and the homeless population in the City. Some of the key goals that would be met include providing housing assistance and preserve publicly assisted units (Goal 1); addressing the unique housing needs of special needs residents (Goal 2); improving the quality of existing housing in the Plan Area (Goal 3); the provision of increased opportunities for the construction of high-quality housing (Goal 4); the provision of affordable housing (Goal 5); and the provision of fair and equal housing opportunity for a unique population.

Based on the City's 2018 Annual Housing Element Progress Report memorandum, which tracks the City's progress toward meeting its RHNA housing allocation, the City still needs 1,493 very low income dwelling units (includes both extremely low and very low); 1,018 low income dwelling units; 1,170 moderate-income dwelling units; and 1,486 above moderate-income dwelling units to meet its RHNA housing allocation (Long Beach 2019).<sup>2</sup> The Specific Plan's net increase of 515 dwelling units would contribute to the City's RHNA requirement. Therefore, implementation of the Specific Plan would help the City meet its current RHNA allocation, as allocated by SCAG. Impacts relating to direct population and housing growth are not anticipated to occur.

#### *Indirect Impacts*

The Century Villages at Cabrillo is an existing residential community that provides housing and supportive services for homeless veterans and the homeless population in the City. Implementation of the Specific Plan would expand and modernize existing facilities on-site, as well as allow for the construction of new residential units, amenities, education facilities, commercial/retail space, services and administration, and residential/other space for existing and future residents of the Plan Area. The increase in non-residential square footage would serve the residential population onsite. It is anticipated that the new job opportunities onsite would be filled by employees from the local and regional area and would not induce substantial unplanned population growth.

The Plan Area is fully developed and in a highly urbanized area of the City. As substantiated in Section 5.16, *Utilities and Service Systems*, adequate infrastructure and utilities are available to serve the Plan Area, and the Specific Plan would not require new infrastructure or extension of existing infrastructure that may indirectly induce population growth nearby. Therefore, impacts relating to indirect population and housing growth are not anticipated to occur.

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<sup>2</sup> Based on permitted units (Table B of the 2018 Annual Housing Element Progress Report memorandum).

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### POPULATION AND HOUSING

#### 5.11.4 Cumulative Impacts

The Specific Plan would conservatively provide 515 new homes in a housing-rich city. When combined with the related projects (see Appendix I, TIS, for the related projects list), there would be an increase of 645 residential units and 296,310 square feet of industrial uses (including stormwater treatment, related project #7). The related projects' industrial uses would generate approximately 640 jobs<sup>3</sup>, which when combined with the Specific Plan, results in 907 jobs. As shown in Table 5.11-8, the projected population, housing units, and employment growth generated by the Specific Plan and related projects would be within the anticipated growth for the City. Additionally, by adding housing and non-residential uses in the city, the combined projects would slightly increase the city's jobs-housing ratio from the "Without Project" conditions (see Table 5.11-8, *Cumulative Projects Population, Housing, and Employment Growth Trends in Long Beach*). Therefore, the Specific Plan and the related projects would slightly improve the city's jobs-housing balance. Impacts would be less than significant.

**Table 5.11-8 Cumulative Projects Population, Housing, and Employment Growth Trends in Long Beach**

	Existing (2018) <sup>1</sup>	Buildout Year (2033) Without Specific Plan <sup>2</sup>	Specific Plan + Related Projects	Existing (2018) Plus Projects	Buildout Year (2033) Plus Projects	SCAG Growth Projections (2045)
Population	468,883	480,572	1,806	470,689	482,378	489,600
Housing Units	175,235	193,106	645	176,880	193,751	208,110
Employment	159,307 <sup>3</sup>	171,159	907	160,214	172,066	185,400
Jobs-Housing Ratio	0.91	0.88	--	0.91	0.89	0.89

<sup>1</sup> Values are from Tables 5.11-1 and 5.11-2.

<sup>2</sup> These values are prorated from SCAG's demographic data contained in Table 5.11-4.

<sup>3</sup> This value is prorated from SCAG's demographic data contained in Table 5.11-4.

#### 5.11.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impact would be less than significant: 5.11-1.

#### 5.11.6 Mitigation Measures

No mitigation measures are required.

#### 5.11.7 Level of Significance After Mitigation

No significant impacts related to population and housing were identified; therefore, no significant and unavoidable adverse impacts would occur.

#### 5.11.8 References

City of Long Beach. Development Services, Planning Bureau. 2014, January 7. 2013-2021 Housing Element.

<sup>3</sup> Based on "General Light Industrial" employee generation rate of 1 employee/463 square feet (USGBC 2008).

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### 5.12 PUBLIC SERVICES

This section of the Draft Environmental Impact Report (DEIR) addresses the Villages at Cabrillo Specific Plan's (Specific Plan's) impacts to public services, including providing fire protection and emergency services, police protection services, school services, and library services.

Park services are addressed in Section 5.13, *Recreation*. Public and private utilities and service systems, including water, wastewater, and solid waste services and systems, are addressed in Section 5.16, *Utilities and Service Systems*.

#### 5.12.1 Fire Protection and Emergency Services

##### 5.12.1.1 ENVIRONMENTAL SETTING

###### Regulatory Background

Federal, state, and local laws, regulations, plans, and guidelines related to public services, including fire protection and emergency services, police protection services, school services, and library services, that are applicable to the Specific Plan are summarized below.

###### *Federal*

###### ***International Fire Code***

The International Fire Code (IFC) regulates minimum fire safety requirements for new and existing buildings, facilities, storage, and processes. The IFC includes general and specialized technical fire and life safety regulations addressing fire department access; fire hydrants; automatic sprinkler systems; fire alarm systems; fire and explosion hazards safety, use and storage of hazardous materials; protection of emergency responders; industrial processes; and many other topics.

###### *State*

###### ***California Fire Code***

The California Fire Code (CFC; California Code of Regulations Title 24, Part 9) sets forth requirements including emergency access, emergency egress routes, interior and exterior design and materials, fire safety features including sprinklers, and hazardous materials. The CFC is issued on a three-year cycle; most recently the 2019 Edition took effect July 1, 2019, and was adopted and incorporated by reference in Chapter 18.48 (Fire Code) of the LBMC.

###### ***California Health and Safety Code***

California Health and Safety Code Sections 13000 et seq. include fire regulations for building standards (also in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building, childcare facility standards, and fire suppression training.

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### PUBLIC SERVICES

#### *Local*

##### *City of Long Beach Municipal Code*

The following provisions from the LBMC focus on fire service impacts associated with new development projects and are relevant to the Specific Plan:

- **Chapter 18.16 (Fire Facilities Impact Fees).** This chapter establishes the fees that are imposed on residential and nonresidential development to ensure new development pays its share of the costs required to support the needed fire facilities and related costs necessary to accommodate such development. The funds are to be utilized for payment of the actual or estimated costs of fire facilities, apparatus, and equipment related to new residential and nonresidential construction.
- **Chapter 18.48 (Fire Code).** The Long Beach City Council adopts and incorporates by reference into the LBMC the 2019 Edition CFC, excluding sections, chapters, or appendices pursuant to LBMC Section 18.48.040. The CFC sets forth requirements including emergency access, emergency egress routes, interior and exterior design and materials, fire safety features including sprinklers, and hazardous materials.

##### *City of Long Beach Proposition H*

The Police and Fire Public Safety Oil Production Act Fund, Proposition H, was established to provide dedicated funds for police officers and firefighters by assessing a special production tax on oil producers in Long Beach. The special tax proceeds support police and fire response to public safety needs. Effective July 1, 2018, the tax rate is \$0.30 per barrel (Long Beach 2019a).

### Existing Conditions

Fire protection and emergency medical services in Long Beach, including the Plan Area, are provided by the Long Beach Fire Department (LBFD). LBFD is divided into five bureaus, which are further broken down into divisions: Operations Bureau, Fire Prevention Bureau, Support Services Bureau, Administration Bureau, and Disaster Management Bureau. LBFD maintains one department headquarters and 23 fire stations, including two fire boat stations in the port area and one airport fire station in the Long Beach Airport. LBFD also has nine permanent lifeguard facilities and 41 seasonal stations, a training center, and an emergency communications and operations center.

#### *Fire Stations, Staffing, and Equipment*

The closest Long Beach fire stations to the Plan Area are Station No. 13 at 2475 Adriatic Ave, approximately 0.82 miles northeast of the Plan Area and Station No. 3 at 1222 Daisy Avenue, approximately 1.55 miles southeast of the Plan Area. These LBFD stations would likely serve the Plan Area given their proximate locations. Existing equipment and staffing at these two LBFD fire stations are described below in Table 5.12-1.

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PUBLIC SERVICES**Table 5.12-1 Long Beach Fire Department Stations**

Station No.	Location	Apparatus	Daily Staffing
Station 13	2475 Adriatic Avenue Long Beach, CA 90810	One Type 1 Fire Engine	Four-person engine - Captain, Engineer, one Firefighter, one Firefighter/Paramedic
Station 3	1222 Daisy Avenue Long Beach, CA 90813	One Type 1 Fire Engine	Four-person engine – Captain, Engineer and two Firefighters
		One Rescue	Two-person rescue – two Firefighter/Paramedics

Source: LBFD, 2020b

*Calls for Service and Response Times*

LBFD responded to over 10,600 calls for service in January and February 2020 (LBFD 2020a). In 2019, LBFD responded to approximately 72,00 calls for services (Long Beach 2019c).

For structure fire calls the LBFD has a response time target for on-scene arrival of the first appropriate unit within 6 minutes and 20 seconds from call initiation, 90 percent of the time. LBFD response time goals are as follows:

- First-in Response Unit – 6 minutes and 20 seconds
- First-in Engine Truck – 6 minutes and 20 seconds
- First-in Basic Life Support Response Unit – 7 minutes
- First-in Advanced Life Support Response Unit – 6 minutes
- First-in Paramedic Assessment – 6 minutes and 20 seconds

LBFD's average response time is 6 minutes and 43 seconds, which is under the national average response time of 7 minutes in urban areas. There are no existing deficiencies of fire protection services to the Plan Area and not future plans for improvements or expansion (LBFD, 2020b).

*Funding*

Funding for LBFD operations and maintenance comes primarily from the following sources:

- City of Long Beach General Fund,
- Tidelands operation revenue (permit fees and rents from various waterfront concessions; Convention Center and Hyatt leases; The Aquarium of the Pacific; Queen Mary rent; and parking revenue from beach lots), and
- Revenue from LBFD's responsibilities as the City's Certified Unified Program Agency (mainly hazardous materials business emergency plan checking).

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A small percentage of LBFD funds comes from the Proposition H special production tax on oil producers mentioned above. Other revenue sources include paramedic fees, fire building plan and building checks, various state and federal grants, and private donations.

#### 5.12.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- FP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

#### 5.12.1.3 ENVIRONMENTAL IMPACTS

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.12-1: Development pursuant to the Specific Plan would introduce new dwelling units, residents, nonresidential uses, and workers into the LBFD's service boundaries, thereby increasing the requirement for fire protection facilities and personnel. [Threshold FP-1]**

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**Impact Analysis:** Implementation of the Specific Plan would increase the overall demand on fire protection and emergency services in the City. Buildout would add net increase of 515 dwelling units, 1,442 residents, 66,970 square feet of amenities, 4,800 square feet of educational uses, 17,000 square feet of commercial/retail uses, and 40,750 square feet of administrative and supportive services. This growth in accordance with the Specific Plan is expected to create the typical range of fire and emergency service calls, and would increase call volumes, which impacts response times for emergency and non-emergency services. As growth occurs, LBFD's costs to maintain equipment and apparatus, and to train and equip personnel, would also increase (LBFD 2020b).

However, considering the existing firefighting resources available in the City, implementation of the Specific Plan is not expected to result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impact (LBFD, 2020b). While LBFD indicated that additional growth could negatively impact response times, no requirement for the significant expansion or construction of a new fire station was indicated (LBFD, 2020b). Additionally, future development that would be accommodated by the Specific Plan would occur in an area of the City already served by LBFD; therefore, the Specific Plan would not result in an expansion of LBFD's service area. In the event of an emergency within the Plan Area that requires more resources than the primary fire stations that serve the area could provide, LBFD would direct resources to the site from other LBFD stations nearby.

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The potential demand for additional personnel, equipment, and operational costs generated by the Specific Plan would be funded and offset through the increased tax revenue generated from the additional development allowed under the Specific Plan. Individual development projects would be reviewed by the City and LBFD and would be required to comply with the requirements in effect at the time building permits are issued.

LBFD would also continue to be supported by Proposition H revenue, the City's General Fund, the City's Tidelands operation revenue, and other revenue sources such as paramedic fees, fire building plan and building checks, various state and federal grants, and private donations. Any additional personnel, building, and materials costs for fire services in the City required due to increased demand from future development accommodated by the Specific Plan would be offset by these revenues.

Additionally, during the City's development review and permitting process, LBFD would review and approve individual development projects to ensure that adequate facilities, infrastructure, and access are provided to serve the needs of LBFD. For example, individual development projects would be required to incorporate adequate fire protection facilities to the satisfaction of LBFD. Specific fire and life-safety requirements for the construction phase of future development projects that would be accommodated under the Specific Plan would be addressed at the building and fire plan check review stage for each development project.

All development projects that would be accommodated under the Specific Plan would also be required to comply with the most currently adopted fire codes, building codes, and nationally recognized fire and life safety standards of Long Beach, Los Angeles County, and the State of California. For example, development projects would be required to comply with the most current edition of the CFC, which is incorporated by reference in LBMC Chapter 18.48. Compliance with these codes and standards is ensured through the City's and LBFD's development review and building plan check process.

Based on the preceding, implementation of the proposed Specific Plan would not result in substantial adverse impacts related to fire protection and emergency services.

#### 5.12.1.4 CUMULATIVE IMPACTS

The geographic area for cumulative analysis of fire protection services is the service territory for LBFD. Residential and employment population increases and associated increases in the demand for public services have been taken into account in long-range planning efforts on behalf of the County of Los Angeles, the City of Long Beach, and the agencies providing public services to the area.

Other projects would pay Fire Facilities Impact Fees to the City and would also result in increased General Fund revenues to the City. The City's population is forecast to increase from 466,255 in 2012 to 484,485 in 2040, an increase of 18,230 or 3.9 percent. Employment in the City is forecast to increase from 153,154 in 2012 to 181,665 in 2040, an increase of 28,511 or 18.6 percent (LSA 2019). Increased property and sales tax from future new developments would increase the City's General Fund in rough proportions, providing funding for any capital improvements necessary to maintain adequate fire protection facilities, equipment, and/or personnel. By maintaining a consistent level of service through expansion or facility improvements, LBFD would be able to ensure that its performance objectives are consistently met. In addition, compliance with the

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existing regulations would maintain adequate access within the Plan Area, which further ensures an adequate level of service for fire protection and emergency services to residents and workers in the Plan Area.

Furthermore, individual development projects pursuant to the City's General Plan would be reviewed by the City and LBFD and would be required to comply with the requirements in effect at the time building permits are issued, including the payment of the fire facilities impact fee, per Chapter 18.16 (Fire Facilities Impact Fees) of the City's Municipal Code.

Therefore, the Specific Plan's increased demand for fire protection services, in conjunction with the increased demand for cumulative development pursuant to the City's General Plan, would not result in significant cumulative impacts.

#### 5.12.1.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact (specific to fire protection and emergency services) would be less than significant: 5.12-1.

#### 5.12.1.6 MITIGATION MEASURES

No potentially significant impacts have been identified and no mitigation measures are required.

#### 5.12.1.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures have been identified and impacts are less than significant.

### 5.12.2 Police Protection

#### 5.12.2.1 ENVIRONMENTAL SETTING

##### Regulatory Background

Local laws, regulations, plans, or guidelines related to police protection services that are applicable to the Specific Plan are summarized below.

##### *City of Long Beach Municipal Code*

The LBMC identifies land use categories, development standards, and other general provisions that ensure consistency between the City's General Plan and proposed development projects. The following provisions from the LBMC focus on police services impacts associated with new development projects and are relevant to the Specific Plan:

- **Chapter 18.15 (Police Facilities Impact Fees).** Imposed on residential and nonresidential development for the purpose of assuring that impacts created by new development pay its share of costs required to support needed police facilities and related costs necessary to accommodate such development.

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#### *City of Long Beach Proposition H*

As described above, the Police and Fire Public Safety Oil Production Act Fund, Proposition H, provides dedicated funds for police and fire services by establishing a special production tax on oil producers in Long Beach. Effective July 1, 2018, the tax rate is \$0.30 per barrel (Long Beach 2019a).

#### Existing Conditions

The Long Beach Police Department (LBPD) provides police services to the entire City of Long Beach, including the Plan Area. LBPD is organized into the Office of the Chief of Police, Internal Affairs Division, and the following four bureaus: Investigation, Support, Patrol, and Administration. The Plan Area is located within Beat 2 of the West Patrol Division, located at 1835 Santa Fe Avenue. The West Division includes the Port of Long Beach, the area west of the 710 Freeway and a large portion of Central Long Beach. A total of 136 sworn officer and three civilian employees serves the West Patrol Division service area (LBPD 2020).

#### *Calls for Service and Performance Standards*

LBPD responded to 608,163 calls for service in Fiscal Year 2019, the latest year for which data are available. The City's 2020 Adopted Budget estimated that LBPD would response to 600,000 calls for service in Fiscal Year 2020 (Long Beach 2019d).

LBPD's West Division Patrol response time target for Priority One Calls, life-threatening emergencies such as a shooting or a felony in progress, is under five minutes. LBPD's actual average response time to Priority One calls in 2021, the latest year for which data are available, was 4.4 minutes. LBPD's West Division Patrol response time target for Priority Two Calls, non-emergency calls, is under 25 minutes. LBPD's actual average response time in 2021 is 23.4 minutes. LBPD's West Division Patrol response time target for other call types is under 45 minutes. As of April 2021, 9,782 Priority One calls and 34,897 Priority Two calls for service has been received. (LBPD 2021)

#### *Crime Statistics*

Crime statistics gathered by LBPD from 2014-2019 are listed below in Table 5.12-2. As shown, property crimes (i.e., burglary, grand theft, petty theft, arson, etc.) rose in 2015 and 2016, but decreased gradually since 2017. Similarly, violent crimes (i.e., murder, rape, robbery, aggravated assault) increased between 2015 and 2017, but gradually decreased in the following years (LBPD 2019).

**Table 5.12-2      2014-2019 Crime Statistics**

	2014	2015	2016	2017	2018	2019
Violent	2,269	2,753	2,848	3,099	2,581	2,374
Property	13,133.8	14,367	14,294	12,683	11,876	11,362
<b>Total</b>	<b>15,843.8</b>	<b>17,120</b>	<b>17,142</b>	<b>15,782</b>	<b>14,457</b>	<b>13,736</b>

Source: LBPD 2019.

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#### *Funding*

Funding for LBPDP comes primarily from the City's General Funds, general grants (e.g., federal, state, and county grants), and Tidelands operations. Tidelands operations revenue is related to operations along the Long Beach port, and includes permit fees and rents from waterfront concessions, Convention Center and Hyatt leases, The Aquarium of the Pacific, Queen Mary rent, and parking revenue from beach lots. In addition, similar to LBPD, a small percentage of LBPDP funds is also obtained from Proposition H, which provides dedicated funds for both fire and police services through a per barrel tax on Long Beach oil producers.

#### 5.12.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- PP-1      Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

#### 5.12.2.3 ENVIRONMENTAL IMPACTS

##### Impact Analysis

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.12-2: Implementation of the Specific Plan would introduce new residential and nonresidential structures, residents, and workers into the LBPDP service boundaries, thereby increasing the requirement for police protection services. [Threshold PP-1]**

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**Impact Analysis:** The Specific Plan buildout would increase demands for police protection services in the Plan Area through the net increase of 515 dwelling units, 1,442 residents, 66,970 square feet of amenities, 4,800 square feet of educational uses, 17,000 square feet of commercial/retail uses, and 40,750 square feet of administrative and supportive services. During the construction and operation of the future development projects that would be accommodated under the Specific Plan, the need for police services is expected to grow due to the increase in population and associated potential for additional crime and accidents. Crime and safety issues during project construction may include theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism. After construction, development that would be accommodated by the Specific Plan is anticipated to generate a typical range of police service calls as similar developments, such as vehicle burglaries, residential thefts, disturbances, and driving under the influence.

The increase in demands on police services resulting from the implementation of the Specific Plan would not adversely impact LBPDP's existing resources. There are currently no staffing or equipment deficiencies in the



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service area. Additionally, there are no construction plans or significant renovations scheduled to add to the LBPD's existing resources in the West Division. The increase in potential services needed would not require the construction of a new police station or improvements to the existing station that serves the Plan Area. Implementation of the Specific Plan would result in an increase in calls for service; however, LBPD has indicated that this increase would not adversely impact LBPD's existing resources. If calls for service increase and exceed the capacity of LBPD's existing workforce, additional staff would be requested (LBPD 2021). Additionally, future development that would be accommodated by the Specific Plan would occur in an area of the City already served by LBPD; therefore, the Specific Plan would not result in an expansion of LBPD's service area.

LBPD staffing is expected to gradually increase as the City's population increases; the City's population is forecast to increase from 466,255 in 2012 to 484,485 in 2040, an increase of 18,230 or 3.9 percent of the 2012 population (LSA 2019). Specific Plan buildout is within the forecasted population growth, and City revenues are expected to increase as population increases. As development occurs in accordance with the Specific Plan, the City's General Funds would increase proportionally and would allocate additional funds to LBPD to hire and train additional police officers or administrative personnel.

LBPD would also continue to be supported by Proposition H revenue, a per barrel tax on all oil producers in Long Beach; Tidelands operation revenue; and other revenue sources such as general grants (e.g., federal, state, and county grants). The additional personnel, building, and materials costs for police services in the City required due to increased demand from future development accommodated by the Specific Plan would be offset through these revenue sources.

Based on the preceding, increases in demands for police protection resulting from implementation of the Specific Plan would not have significant impacts on LBPD services.

#### 5.12.2.4 CUMULATIVE IMPACTS

The area considered for cumulative impacts is the LBPD service area. Local population growth would result in an increased demand for public services and facilities, including law enforcement. Service providers would continue to evaluate levels of service and potential funding sources to meet demand. Long-range planning for the provisions of public services and facilities is typically based on the City's General Plan growth projections. Through assessments of the City's capital improvement needs and annual budget review process, police department needs would be assessed, and budget allocations would be revised accordingly to ensure that adequate levels of police services, including police protection facilities, equipment, and/or personnel, are maintained throughout the City.

Increased property and sales tax from future new developments would increase the City's General Funds in rough proportions, providing funding for any capital improvements necessary to maintain adequate police protection facilities, equipment, and/or personnel. By maintaining a consistent level of service through expansion or facility improvements, LBPD would be able to ensure that its performance objectives are consistently met. Furthermore, individual development projects pursuant to the City's General Plan would be reviewed by the City and would be required to comply with the requirements in effect at the time building permits are issued, including the payment of the police facilities impact fees, per LBMC Chapter 18.15.

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Therefore, the demand for police services would not be adversely affected by the Specific Plan in conjunction with cumulative development pursuant to the City's General Plan. No significant cumulative impacts related to police services are anticipated.

#### 5.12.2.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact (specific to police protection services) would be less than significant: 5.12-2.

#### 5.12.2.6 MITIGATION MEASURES

No potentially significant impacts have been identified and no mitigation measures are required.

#### 5.12.2.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures have been identified and impacts are less than significant.

### 5.12.3 School Services

#### 5.12.3.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### *State*

##### ***California State Assembly Bill 2926: School Facilities Act of 1986***

To assist in providing school facilities to serve students generated by new development, Assembly Bill (AB) 2926 was enacted in 1986 and authorizes impact fees on new residential and commercial/industrial development. The bill was expanded and revised in 1987 through the passage of AB 1600, which added Sections 66000 et seq. to the Government Code. Under this statute, payment of impact fees by developers serves as CEQA mitigation to satisfy the impact of development on school facilities.

##### ***California Senate Bill 50***

Senate Bill (SB) 50, passed in 1998, provides a comprehensive school facilities financing and reform program and enables a statewide bond issue to be placed on the ballot. Under the provisions of SB 50, school districts are authorized to collect fees to offset the costs associated with increasing school capacity as a result of development and related population increases. The funding goes to acquiring school sites, constructing new school facilities, and modernizing existing school facilities. SB 50 establishes a process for determining the amount of fees developers would be charged to mitigate the impact of development on school districts from increased enrollment. According to California Government Code Section 65996, development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation."

Under this legislation, there are three levels of developer fees that may be imposed upon new development by the governing school district. Level I fees are assessed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level II fees require the developer to provide one-half

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of the costs of accommodating students in new schools, and the state provides the remaining half. To qualify for Level II fees, the governing board of the school district must adopt a School Facilities Needs Analysis and meet other prerequisites in accordance with California Government Code Section 65995.6. Level III fees apply if the state runs out of bond funds, allowing the governing school district to impose 100 percent of the cost of school facility or mitigation, minus any local dedicated school monies, on the developer.

### Existing Conditions

Long Beach Unified School District (LBUSD) provides school services to the Plan Area. The LBUSD service area includes the cities of Long Beach and Signal Hill, part of the City of Lakewood, and Santa Catalina Island. LBUSD operates 87 schools including 47 elementary schools, eight K-8 schools, 16 middle schools, and 16 high schools. Total LBUSD enrollment in the 2018-19 school year was 73,221 students (CDE 2020; LBUSD 2019a).

The Plan Area is in the attendance areas of the following LBUSD schools: Hudson Elementary School, Garfield Elementary School, and Cabrillo High School. Table 5.12-3 provides the current enrollment and capacity of each of the LBUSD schools.

As shown in Table 5.14-3, existing school facilities at all LBUSD schools serving the Plan Area have remaining capacity for future students. Of the schools serving the Plan Area there is a remaining capacity for 905 students in the elementary schools, 1,012 students in K-8 schools, and 3,184 students at the high school. According to LBUSD, existing school facilities are adequate to serve LBUSD's current conditions (LBUSD 2020c).

**Table 5.12-3 LBUSD Schools Serving the Plan Area**

School	Grades	Current Enrollment (2019-2020)	Current Capacity	Remaining Capacity
<b>Elementary Schools</b>				
Garfield Elementary School 2240 Baltic Avenue Long Beach, CA 90810	K-5	685	Capacity is in the process of being updated. Historically, the capacity for this site has been calculated as 1,590.	905
<b>K-8 Schools</b>				
Hudson Elementary 2335 Webster Avenue Long Beach, CA 90810	K-8	608	Capacity is in the process of being updated. Historically, the capacity for this site has been calculated as 1,620.	1,012
<b>High Schools</b>				
Cabrillo High School 2001 Santa Fe Avenue Long Beach, CA 90810	9-12	2,101	Capacity is in the process of being updated. Historically, the capacity for this site has been calculated as 5,285.	3,184
Source: LBUSD 2020c.				

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#### *Measure K*

Measure K was approved by voters in November 2008, which made \$1.2 billion available from property taxes to build, renovate, and improve LBUSD schools. The funds come from bonds to occur four to six times in the span of ten years. Measure K funds are used primarily for school improvements, including retrofitting schools to meet earthquake safety standards; meeting federal handicap accessibility requirements; upgrading science labs, classrooms, libraries, and restrooms; improving energy and water efficiency; and removing lead paint and asbestos in older buildings (LBUSD 2019b).

Since the measure was approved, steady progress is being made to reconfigure and rehabilitate Long Beach Unified School District's aging schools. The funds made available by Measure K has been budgeted to address the most critical building needs of the district. These needs, identified in the Facility Master Plan and Technology Master Plan, were prioritized through a weighing of numerous factors, including regulatory and building code compliance, technology needs, educational program enhancements, enrollment shifts, school site capacity and utilization, condition of existing structures, board recommendations and equity (LBUSD 2020b).

The first new school to be built with Measure K funds, Nelson Academy in Signal Hill, opened in fall 2012. McBride High School, the first of a number of small high schools being planned, opened in fall 2013. Since then, new construction at Newcomb Academy, Roosevelt Elementary School, Sato Academy, Browning High School and Jordan High School have been completed. In addition, modernization of Renaissance High is nearing completion, while Wilson and Polytechnic High Schools have renovated auditoriums opening in 2017. Dozens of other projects, such as the Cabrillo High School aquatic center and new all-weather fields at most high schools and middle schools are being funded by Measure K (LBUSD 2020b).

#### *Measure E*

Measure E was approved by voters in November 2016, which made \$1.5 billion available to renovate and improve schools in the LBUSD. The entire implementation of Measure E could take up to 10 years, as schools receive air conditioning along with utilities, seismic, accessibility, fire alarm, lighting, and other upgrades. Some schools will have new athletic facilities, including swimming pools and all-weather tracks and fields. Funds from Measure E address four key areas: repairs, technology, air conditioning, and safety.

#### 5.12.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- SS-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for school services.

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## 5.12.3.3 ENVIRONMENTAL IMPACTS

## Impact Analysis

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

**Impact 5.12-3: Development pursuant to the Specific Plan has the potential to result in the generation of 90 new students who would impact the school enrollment capacities of LBUSD schools that serve the Plan Area. [Threshold SS-1]**

**Impact Analysis:** Buildout of the Specific Plan would allow for up to 515 additional dwelling units, which would result in a population increase of 1,442 residents. The population would lead to an increase in student population, which in turn would create additional demand for LBUSD services and facilities. Schools serving the Plan Area include Garfield Elementary School, Hudson Elementary, and Cabrillo High School.

Table 5-12-4 provides an estimate of the number of K–12 grade level students by school type that would be generated by Specific Plan buildout. The estimates use student generation rates specific to LBUSD and are based on general citywide single- and multifamily housing developments. Student generation rates are used by school districts to estimate the number of students generated by new development in order to determine whether or not existing school facilities would be adequate for future students.

Table 5.12-4 also calculates the addition of net new students that could be generated at Specific Plan buildout to the current enrollment in order to determine if there would be adequate capacity at schools serving the Plan Area. This approach is conservative because student enrollment fluctuates over time and the proposed Specific Plan will be constructed over at least a 10-year period. Therefore, project-generated students would not all occur at the same time after the Specific Plan is adopted and capacity can be provided as needed.

Table 5.12-4 Projected Student Populations

Grade Level	LBUSD Student Generation Rates <sup>1</sup>		Net New Students Generated at Specific Plan Buildout <sup>2</sup>	Generated Students	Current Enrollment (2019/2020) <sup>3</sup>	Current Enrollments + Net New Students	Total Capacity	Remaining Capacity
	SFR	MFR						
Elementary (K-5)	0.1611	0.0511	0 SFR 515 MFR	26	685	711	1,590	879
Middle School (6-8)	0.1141	0.0219		11	608	619	1,620	1,001
High School (9-12)	0.1141	0.1022		53	2,101	2,154	5,285	3,131
<b>Total</b>	—	—	<b>515 units</b>	<b>90</b>	<b>3,394</b>	<b>3,484</b>	<b>8,495</b>	<b>5,011</b>

Source: LSA, 2019; LBUSD 2020c

Notes: SFR = single family residential; MFR = multifamily residential

<sup>1</sup> Student generation rates sourced from LBUSD

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**Table 5.12-4 Projected Student Populations**

Grade Level	LBUSD Student Generation Rates <sup>1</sup>		Net New Students Generated at Specific Plan Buildout <sup>2</sup>	Generated Students	Current Enrollment (2019/2020) <sup>3</sup>	Current Enrollments + Net New Students	Total Capacity	Remaining Capacity
	SFR	MFR						

<sup>2</sup> Mobile homes counted as SFR.

<sup>3</sup> Middle School capacity based on K-8 school enrollment data.

As shown in Table 5.12-4, development pursuant to the Specific Plan would generate approximately 90 students at buildout, consisting of 26 elementary school students, 11 middle school students, and 53 high school students. There is more than adequate capacity to serve the Plan Area students; the Specific Plan in combination with current enrollment would leave a remaining capacity of 5,011 total students, including 879 elementary students, 1,001 K-8 students, and 3,131 high school students.

Therefore, based on the preceding, impacts from implementation of the Specific Plan on school services would not be significant.

#### 5.12.3.4 CUMULATIVE IMPACTS

The area considered for cumulative impacts is the LBUSD service area, which includes the cities of Long Beach and Signal Hill, part of the City of Lakewood, and Santa Catalina Island. Cumulative development in the City of Long Beach may generate a substantial increase in student population in LBUSD schools. As population in the City has increased in recent years, the LBUSD enrollment has declined (LSA 2019). However, LBUSD has indicated build out of the General Plan (2040) would potentially create a need to expand existing facilities or construct new facilities (LSA 2019). Assuming LBUSD's enrollment increases, administrators will need to seek short-term and long-term remedies to accommodate those added students. In recognition of these conditions, the State Legislature provided authority for school districts to assess impact fees for both residential and nonresidential development projects. Those fees, as authorized under Education Code Section 17620(a) and Government Code Section 65995(b), are collected by municipalities at the time building permits are issued and conveyed to the affected school district in accordance with a defined fee structure, and the payment of these fees constitutes full mitigation for the impacts generated by new development, per Government Code Section 65995. Other projects would also be required to increase property taxes pursuant to Measure K through approximately 2034. Since all future development projects associated with the Specific Plan, as well as cumulative development pursuant to the City's General Plan, must pay their appropriate impact fees, each development project would mitigate the impacts associated with its activities. No cumulative impact upon LBUSD would be anticipated as a result of the implementation of the Specific Plan in conjunction with other area-wide development activities. Cumulative project impacts would be less than significant.

#### 5.12.3.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact (specific to school services) would be less than significant: 5.12-3.

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#### 5.12.3.6 MITIGATION MEASURES

No potentially significant impacts have been identified and no mitigation measures are required.

#### 5.12.3.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures have been identified and impacts are less than significant.

### 5.12.4 Library Services

#### 5.12.4.1 ENVIRONMENTAL SETTING

##### Existing Conditions

The Long Beach Public Library (LBPL) system provides library resources and services to City residents. The main library is the Long Beach Public Library located approximately 2.2 miles southeast of the Plan Area at 200 West Broadway. In addition, there are 11 smaller, neighborhood libraries within the LBPL system; details regarding their size, population served, collection items, etc. are provided below in Table 5.12-5.

**Table 5.12-5 LBPL – Library Statistics**

Library	Year Built	Size (square feet)	Population Served <sup>1</sup>	Schools Served	Staff FTE <sup>2</sup>	Items Circulated Annually	No. of Volumes
Main	2019	93,500	491,564	6	69.02	121,376	279,436
Alamitos	1929	7,475	53,536	3	3.85	39,988	32,377
Bach	1958	7,000	32,054	16	3.85	79,684	45,539
Bay Shore	1959	6,900	26,693	4	3.85	71,396	44,231
Brewitt	1948	5,225	32,577	8	3.85	51,390	35,339
Burnett	1969	7,500	47,802	9	4.25	40,276	39,972
Dana	1958	6,800	41,791	8	3.85	77,398	41,844
El Dorado	1970	8,160	20,055	11	5.75	135,611	60,687
Harte	1957	6,500	35,879	9	4.75	38,238	40,977
Los Altos	1957	6,750	39,296	11	3.85	84,452	42,242
Mark Twain	2007	16,000	57,433	5	6.52	31,060	67,554
Michelle Obama	2015	24,665	95,000	17	12.22	133,204	62,013

Sources: LSA, 2019.

<sup>1</sup> Based on 2000 US Census

<sup>2</sup> FTE = Full Time Equivalent staff members

In addition to providing books, LBPL offers downloadable audiobooks, e-books, DVDs, CDs, videos, and other emerging media types. Patrons at any of the LBPL branch libraries have access to all collection items in the entire library system through interlibrary services. LBPL also has meeting room and auditorium rentals, family learning centers (i.e., homework and research help), book clubs, toddler, preschool and family story time, online computer tutorials, self-service checkout stands, computer studio, business and career resources, senior services, and special events at various neighborhood libraries.

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While the City has not formally adopted a service standard of library space per capita, the City did establish a target of 0.45 sf per capita in its budget for Fiscal Year 2007.<sup>1</sup> As of 2018, the City provided approximately 0.50 sf per capita, representing a surplus of library space by 0.05 sf per capita (LSA 2019).

The LBPL libraries closest to the Plan Area most likely to serve residents in the Plan Area include the Harte Neighborhood Library (1.5 miles northeast), Burnett Neighborhood Library (1.9 northeast), Mark Twain Neighborhood Library (2.7 miles southeast), and Main Library (2.2 miles southeast). Details regarding their facilities and services are provided in Table 5.12-6.

**Table 5.12-6 LBPL Libraries Serving the Plan Area**

Branch	Location	Facilities/Resources	Special Services
Billie Jean King Main Library	200 W. Broadway Long Beach, CA 90802	135,000 square feet; 279,436 volumes; auditorium and meeting rooms	Public access computers; Family Learning Center; Information Center for People with Disabilities; government publications collection; The Studio, Makerspace, and learning lab; Miller Room, Art resource center; Summer Reading Program
Harte Neighborhood Library	1595 W. Willow Street Long Beach, CA 90810	6,500 square feet, 40,977 volumes, meeting room	Public access computers; Family Learning Center; Summer Reading Program
Burnett Neighborhood Library	560 E Hill Street Long Beach, CA 90806	7500 square feet; 39,972 volumes; community room	Public access computers; Family Learning Center; Summer Reading Program
Mark Twain Neighborhood Library	1401 E. Anaheim Street Long Beach, CA 90813	16,000 square feet; 67,554 volumes; community room; study rooms	Public access computers; Family Learning Center; Summer Reading Program; Khmer collection

Source: LBPL 2020a, b, c, d

### Funding

Funding for LBPL salaries and maintenance and support comes from the City's General Fund. According to the City's 2020 Adopted Annual Budget, LBPL expects a one-time fund to support new fundraising software platform, complete digitization of the Press-Telegram archives, expanded library hours, and increase budget for contract security guards. In addition to the General Fund, revenue is also obtained through library activities such as library fines, facility rentals, and passport photo/execution fees as well as grants and private donations, provided mainly by the Friends of the Long Beach Public Library and the Long Beach Public Library Foundation.

#### 5.12.4.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

<sup>1</sup> Fiscal Year 2007 is the most current year for which target library performance standards have been established. These standards have not been adopted by the City.



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- LS-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services.

#### 5.12.4.3 ENVIRONMENTAL IMPACTS

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.12-4: Development pursuant to the Specific Plan would result in the generation of up to 1,442 additional residents in the Plan Area, which would lead to an increase in demand for local library services. [Threshold LS-1]**

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**Impact Analysis:** Project buildout would increase population onsite by an estimated 1,442, thus increasing demands for library services. Increased demands are expected to most affect the library facilities closest to the Plan Area—that is, Harte Neighborhood Library, Burnett Neighborhood Library, and Mark Twain Neighborhood Library. Project impacts on the LBPL system would include needs for increased staffing, increased collection budget, and increased operating hours. The LBPL uses utilization of existing library facilities—such as gate count, circulation statistics, and computer usage—to estimate library service impacts of future developments and to determine the need for expanded hours. For example, in the City’s 2020 Adopted Annual Budget, LBPL determined the need for expanded library hours (Sunday, Monday afterschool, and/or summer morning hours) at select locations from input received from utilization data and a library patron survey.

Additionally, although future Project residents would be mainly served by the libraries shown in Table 5.14-6, *LBPL Libraries Serving the Plan Area*, they would have access to all 12 libraries within LBPL’s system (see Table 5.14-5, *LBPL Library Statistics*). Project residents would also have access to Los Angeles County Public Library (LACPL) facilities and resources outside in surrounding neighboring cities via a library card issued by LACPL.

Furthermore, LBPL would continue receiving funding for library facilities and resources through the City’s General Fund and through library activities, such as fines, facility rentals, and passport photo/execution fees as well as grants and private donations, provided mainly by the Friends of the Long Beach Public Library and the Long Beach Public Library Foundation. Specific Plan buildout would generate additional General Fund revenue for the City, thus helping to reduce project impacts. Impacts would be less than significant.

#### 5.12.4.4 CUMULATIVE IMPACTS

The area considered for cumulative impacts is the City of Long Beach. Other projects would add population to the City; the population is forecast to increase from 466,255 in 2012 to 484,485 in 2040, an increase of 18,230 or 3.9 percent of the 2012 population (LSA 2019). Cumulative population growth within the City associated with the Specific Plan and development pursuant to the General Plan may potentially increase the demand for library services. In addition, funding for library services is allocated through the City’s General Funds. Therefore, as new developments within the City occur, property and sales tax would increase in rough

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proportion and contribute to an increase in the City's General Funds, consequently resulting in a larger allocation of funds towards library services.

Future construction and operation of new library facilities, triggered by a shortage of libraries and future population growth throughout the City of Long Beach, could result in significant impacts. However, until a determination is made that such facilities are necessary, and the precise location and type of facility are identified, the potential significant impacts cannot be meaningfully evaluated and mitigated. Addressing potential significant impacts associated with any potential sites or facilities of unknown size would be too speculative at this time. Therefore, no cumulatively significant impacts associated with the construction and operation of new library facilities to address the future shortfall in library service standards can conclusively be identified at this time.

#### 5.12.4.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, the following impact (specific to library services) would be less than significant: 5.12-4.

#### 5.12.4.6 MITIGATION MEASURES

No potentially significant impacts have been identified and no mitigation measures are required.

#### 5.12.4.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures have been identified and impacts are less than significant.

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### 5.13 RECREATION

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Villages at Cabrillo Specific Plan (Specific Plan) to impact public parks and recreational facilities.

#### 5.13.1 Environmental Setting

##### 5.13.1.1 REGULATORY BACKGROUND

State and local laws, regulations, plans, or guidelines related to public parks and recreational facilities that are applicable to the Specific Plan are summarized below.

##### State

###### *Mitigation Fee Act*

The California Mitigation Fee Act, Government Code sections 66000, et seq., allows cities to establish fees that are imposed on development projects for the purpose of mitigating the impact that the projects have on the city's ability to provide specified public facilities. In order to comply with the Mitigation Fee Act the city must follow four primary requirements: 1) Make certain determinations regarding the purpose and use of a fee and establish a nexus or connection between a development project or class of project and the public improvement being financed with the fee; 2) Segregate fee revenue from the General Fund in order to avoid commingling of capital facilities fees and general funds; 3) For fees that have been in the possession of the city for five years or more and for which the dollars have not been spent or committed to a project the city must make findings each fiscal year describing the continuing need for the money; and 4) Refund any fees with interest for developer deposits for which the findings noted above cannot be made.

###### *California Public Park Preservation Act*

The primary instrument for protecting and preserving parkland in the state is California's Public Park Preservation Act of 1971. Under the PRC sections 5400 - 5409, cities and counties may not acquire any real property that is in use as a public park for any nonpark use unless compensation, land, or both, are provided to replace the parkland acquired. This ensures no net loss of parkland and facilities.

##### Local

###### *City of Long Beach Municipal Code*

The LBMC identifies land use categories, development standards, and other general provisions that ensure consistency between the City General Plan and proposed development projects. The following provision from the LBMC related to recreational facilities are relevant to the Specific Plan.

- **Title 18 (Buildings and Construction), Chapter 18.18 (Park and Recreation Facilities Fee).** The City's Park and Recreation Facilities Fee was adopted pursuant to the California Mitigation Fee Act. It imposes a park fee on new residential development. The purpose of the fee is to ensure that the park land

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and recreational facility standards established by the City are met with respect to the additional needs created by such development.

#### 5.13.1.2 EXISTING CONDITIONS

##### City Parks and Recreation Facilities

According to the City of Long Beach General Plan Open Space and Recreation Element, the City maintains 94<sup>1</sup> parks encompassing 1,413 acres. In addition to the City parks, Long Beach also offers beaches, golf courses, and water recreational opportunities that contribute additional available parkland, totaling 2,614 acres (Long Beach 2002). The Long Beach Park, Recreation, and Marine Department (LBPRM) owns and maintains 26 community centers, two historic sites, two major tennis centers, one municipal golf course, the Long Beach Animal Care Services Bureau, the largest municipally operated marina system in the nation with 3,100 boat slips, and six miles of beaches. LBPRM also offers more than 2,800 recreation and educational classes per year, including youth/adult sports leagues, teen centers, sports and aquatics programs, skate parks, a sailing and aquatics center, public swimming pools, senior citizens services, adaptive recreation, and cultural centers (Long Beach 2020a).

The types of park and recreational opportunities available to the City's residents and visitors are summarized below.

- **Mini Parks** are less than two acres and serve residents within an eighth mile radius. These parks include landscaping irrigation, walking paths, seating areas, picnic tables, tot lots and sculpture/art.
- **Neighborhood Parks** average eight acres and serve residents within a quarter to half mile radius. It includes all of the uses within Mini Parks and recreation fields, courts and rinks, water features, libraries, day care centers, community centers, and restroom buildings. Building coverage in neighborhood parks is limited to seven percent of the total park area.
- **Community Parks** average 35 acres in size and serve neighborhoods within a one mile radius. These parks focus on community recreation, including sports fields, open space, and swimming pools. Building coverage in community parks is limited to ten percent of the total park area.
- **Greenway Parks** are undeveloped green space, which connect recreation opportunities throughout a community. Building coverage is limited to one percent of the total park area.
- **Special Use Parks** provide unique cultural heritage and/or educational features which attract a broad audience from near and far. Significant development features are determined on a case-by-case basis with community input and approved by the City Council.

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<sup>1</sup> Total by park type classification wherein portions of El Dorado, Heartwell and DeForest parks fall into multiple park type classes. When parks are simply counted by name, there are 88 parks in the City.

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- **Regional Parks** are a minimum of 175 acres in size and serve communities within a half hour drive time. Permitted uses include all uses allowed within community parks, and building coverage is limited to two percent of the total park area.

The total acreage for the types of parks and recreational opportunities available to the City's residents and visitors are described in Table 5.13-1.

**Table 5.13-1 City of Long Beach Parks and Recreation**

Park Category	Number of Parks	Total Acres
Mini Parks	22	21
Neighborhood Parks	19	147
Community Parks	13	464
Greenway Parks	9	71
Special Use Parks <sup>1</sup>	28	310
Ranchos	2	12
El Dorado Regional Park	1	401
Beaches	—	247
Golf Courses	—	568
Water Recreation <sup>2</sup>	—	373
<b>Total</b>	<b>94</b>	<b>2,614</b>

Source: Long Beach 2002.

<sup>1</sup> Includes the riverfront recreation vehicle campground, two special events parks (Queen Mary and Rainbow Lagoon), the calm water swimming park at Colorado Lagoon, and Shoreline/Riverfront, Santa Crus and Victory Parks, a nature center park, and a nature trail park.

<sup>2</sup> Includes Alamitos Bay and Downtown Marina surface areas

### Public Parks Serving the Plan Area

The following additional Long Beach park and recreational facilities are within one-quarter mile of the Plan Area, which is considered to be the service area distance of a neighborhood park by the City of Long Beach:

- **Admiral Kidd Park (Neighborhood Park).** Located at 14th Street and Chestnut Avenue (northeast of the Plan Area), this neighborhood park (comprising 12.29 acres) has a soccer field, basketball court, playground, community center, staff office, and restrooms (Long Beach 2020b).
- **Hudson Park (Neighborhood Park).** This neighborhood park (comprising 13.06 acres) is at 2335 Webster Avenue (north of the Plan Area) and has two baseball fields, a soccer field, community garden, picnic area, playground, and restrooms (Long Beach 2020c).

### Parkland Standard

As stated in the City's General Plan Open Space and Recreation Element, the City's goal for providing adequate park and recreational facilities to its residents is 8 acres per 1,000 residents. Park and recreational areas exclude the joint use school facilities and only apply to parkland owned and maintained by the City. Currently, the City maintains 2,614 acres of parkland. Based on the City's estimated 2019 population of 475,013 (DOF 2019), the City's parkland ratio is approximately 5.5 acres per 1,000 residents. Therefore, the City has a current deficit of approximately 1,200 acres of parkland.

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#### Facility Funding

Funding for parks and recreational facilities for the City comes primarily through property tax revenues. In addition, Chapter 18.18 (Park and Recreation Facilities Fee) of the LBMC outlines the fee imposed on all dwelling unit developments, with the exception of replacement or relocation of existing dwelling units or affordable housing for lower income households. The fee is determined by the City Council and is reviewed on an annual basis. Effective October 2019, the fee is \$4,613.04 per single-family unit, \$3,562.78 per multifamily unit, \$2,619.63 per mobile home dwelling, and \$1,781.39 per accessory unit (e.g., artist studio, caretakers unit, personage) (Long Beach 2019a). The funds generated from this fee are used solely for the acquisition, development, improvement, and maintenance of public parks and recreational facilities in the City, as proposed by the City's Five Year Capital Improvement Program.

#### 5.13.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- R-1            Would 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.
- R-2            Includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

#### 5.13.3 Environmental Impacts

##### 5.13.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.13-1: Implementation of the Specific Plan would introduce additional residents in the Plan Area, which may lead to an increase in the use of existing City of Long Beach park and recreational facilities. [Threshold R-1]**

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**Impact Analysis:** Development accommodated by the Specific Plan would lead to an increase in the number of dwelling units in the Plan Area, from 865 under existing conditions to 1,380 under proposed conditions—this would involve a net increase of 515 dwelling units (see Table 3-1, *Summary of Proposed Land Uses*). The additional dwelling units would result in an increase in the number of residents in the City, which could lead to an increase in demand for existing City parks and recreational facilities.

As stated above, the City currently has 5.5 acres of parkland per 1,000 residents (2,614 acres of parkland in total), resulting in a deficit of 1,200 acres. This is less than the City's target goal of 8 acres per 1,000 residents. Because of the existing citywide deficit, it is possible that the existing City park and recreational facilities that would serve future residents of the Plan Area would experience increased use that may lead to deterioration



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over time. Using the City's goal of 8 acres of parkland per 1,000 residents, the net increase in demand for parkland due to buildout of the Specific Plan (515 new residents) would be approximately 4.1 acres. As discussed in Section 5.11, *Population and Housing*, assuming an average household size of 2.8 residents per unit, consistent with the household size reported in the Long Beach Housing Element, and assuming that all 515 net new dwelling units would generate new residents, the Specific Plan would generate 1,442 new residents in the City. A total of 30.9 acres of parkland would be required to support the Specific Plan buildout of 3,864 residents<sup>2</sup> (total includes existing plus future residents).

The Plan Area currently has approximately 2.3 acres of play area that would be available to future residents. The play area consists of playground, mural, shade structures, tetherball, and other amenities. Additionally, open space is required for new residential development accommodated by the Specific Plan. Specific Plan Section 4.7 (Open Space Requirements), sets the requirements for open space and amenities in the Plan Area. As shown in Table 5-13.2, *Open Space Requirements*, 100 square feet of outdoor open spaces in the residential common areas are required per dwelling unit while 50 square feet of indoor space in the residential common areas are required per dwelling unit. Also, 50 square feet of private residential open space is required per dwelling unit and private residential open space can be replaced by additional common outdoor spaces of equal size.

**Table 5.13-2 Open Space Requirements**

Type	On-Site Area Required
Residential Common-Outdoor	100 SF per dwelling unit
Residential Common-Indoor	50 SF per dwelling unit
Residential Private	50 SF per dwelling unit

Source: City Fabric 2019.  
Notes: SF= Square Feet

As discussed above, the Specific Plan would result in a net increase of 515 dwelling units. Under the open space requirements of the Specific Plan, the Project would result in the provision of a total of 150,000 square feet or 3.44 acres of new open space (75,000 square feet of outdoor common residential open space, 37,500 square feet of indoor common residential open space, and 37,500 square feet of private residential open space). Under the Specific Plan, public spaces will be deliberately designed and linked through the proposed onsite Wellness Trail network to support the Plan Area's residents while continuing to build social connections within the community. Casa de Cabrillo's open courtyard will be expanded and amenities, services and outdoor spaces serving the most vulnerable residents will be shifted to the east with the Preschool, Play Garden and Oasis Center relocated near Anchor Place and KaBoom! playground shifted closer to Family Commons. The exact configuration and location of open spaces will be established as part of each residential development project that moves forward. Figure 3-6, *Open Space Network*, shows the different types of open space that will be implemented under the Specific Plan and be available to residents of the Plan Area. The exact configuration

<sup>2</sup> Calculated based on the assumption of an average household size of 2.8 residents per unit and buildout of Specific Plan would result in a total of 1,380 dwelling units.

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and location of open spaces will be established as part of each development. Open spaces displayed in Figure 3-6 are to demonstrate intended distribution and relationships.

Although the Plan Area does not meet the City's goal of 8 acres per 1,000 residents onsite, the existing 2.3 acres of open space/play area and the addition of 3.44 acres of proposed open space provides more than adequate park and recreational facilities in the Plan Area to accommodate the future residences such that implementation of the Specific Plan would not cause the deterioration of existing facilities. The open space requirement in the Specific Plan was developed to best serve the needs of the residents of the Plan Area and will avoid deterioration of nearby park facilities.

Additionally, future residents of the Plan Area would have access to (within walking distance) the following public park and recreational facilities, which comprise just over 25 acres of usable parkland and open space:

- **Admiral Kidd Park (Neighborhood Park).** Located at 14th Street and Chestnut Avenue (0.2 miles northeast of the Plan Area), this neighborhood park (comprising 12.29 acres) has a soccer field, basketball court, playground, community center, staff office, and restrooms (Long Beach 2020b).
- **Hudson Park (Neighborhood Park).** This neighborhood park (comprising 13.06 acres) is at 2335 Webster Avenue (0.2 miles north of the Plan Area) and has two baseball fields, a soccer field, community garden, picnic area, playground, and restrooms (Long Beach 2020c).

Furthermore, there are additional parks, recreational facilities, community centers, and beaches throughout the City that would serve future project residents (see Table 5.13-1, *City of Long Beach Parks and Recreation*).

Based on the preceding, impacts to existing parks and recreational facilities would be less than significant with implementation of the Specific Plan.

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**Impact 5.13-2: Implementation of the Specific Plan's proposed recreational facilities needed to serve future project residents would not result in a significant environmental impact. [Threshold R-2]**

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**Impact Analysis:** As noted above, the Specific Plan would result in the development of a total of 150,000 square feet or 3.44 acres of open space in the Plan Area. Development and operation of new parks and recreational facilities in the Plan Area may have an adverse physical effect on the environment, including impacts relating to air quality, lighting, noise, and traffic. Environmental impacts associated with the construction and operation of new parks and recreational facilities are analyzed throughout the topical sections of Chapter 5.0 of this DEIR. As demonstrated in this DEIR, the development or expansion of open space and recreational facilities in the Plan Area would not result in significant impacts to the environment. Additionally, future open space and recreational facility development in the Plan Area would be required to adhere to the development standards and design guidelines of the Specific Plan.

Furthermore, per the analysis provided above under Impact 5.13-1, development that would be accommodated under the Specific Plan would not require the construction of new or expansion of existing City parks and recreational facilities due to use of these parks and facilities by future project residents.

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Therefore, implementation of the Specific Plan would not result in significant impacts relating to new and/or expanded park and recreational facilities.

#### 5.13.4 Cumulative Impacts

Buildout of the Specific Plan would result in a population increase of approximately 1,442 additional residents and a need for approximately 4.1 acres of park or recreational facilities based on the City's goal of 8 acres of parkland per 1,000 residents. To determine the cumulative public park and recreational impacts, citywide growth forecasts are considered. Based on the Southern California Association of Governments' 2020-2040 Regional Transportation Plan/Sustainable Communities Strategy, the City would have approximately 198,200 housing units in 2045 (SCAG 2020), an increase of approximately 20,822 over 2019 conditions (177,378 housing units; DOF 2019). During this time, the City's population is anticipated to increase from the City's estimated 2019 population of 475,013 (DOF 2019) to approximately 489,600 (SCAG 2020). Based on the City's goal of eight acres of parkland per 1,000 residents, this increase of approximately 14,587 people would create a cumulative need for a net increase of approximately 117 acres of public park and recreational space. Although recreational needs of future residents of the Plan Area would add to citywide and regional demand for park and recreational facilities, this growth is presumed to be included in projections identified in the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy,

According to the updated Land Use Element of the General Plan, the City recognizes the need to increase the amount, access, and distribution of open space within the City. The Terminal Island Freeway, located to the west of the Plan Area, has been identified as an area of major change for increasing open space. (Long Beach 2019b). Cumulative development projects would be required to comply with all applicable existing regulations, procedures, and policies that are intended to address impacts to park and recreation facilities. For example, per the City's park dedication requirements under Chapter 18.18 (Park and Recreation Facilities Fee) of the LBMC, all new residential development is required to pay park facilities impact fees to offset the cost to expand or construct new park and recreational space and facilities to adequately serve the City's growing population. Therefore, cumulative impacts related to park and recreational space and facilities would be less than significant.

#### 5.13.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.13-1 and 5.13-2.

#### 5.13.6 Mitigation Measures

No potentially significant impacts have been identified and no mitigation measures are required.

#### 5.13.7 Level of Significance After Mitigation

No mitigation measures have been identified and impacts are less than significant.

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#### 5.13.8 References

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## 5. Environmental Analysis

### 5.14 TRANSPORTATION

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Villages at Cabrillo Specific Plan's (Specific Plan) to result in transportation and traffic impacts in the City of Long Beach. The analysis in this section is based in part on the following source:

- *Century Villages at Cabrillo Specific Plan Draft Transportation Impact Study*, Fehr & Peers, July 2020.

A complete copy of this technical report is included in Appendix J of this DEIR.

#### 5.14.1 Environmental Setting

##### 5.14.1.1 REGULATORY BACKGROUND

State, regional, and local laws, regulations, plans, or guidelines related to transportation that are applicable to the Specific Plan are summarized below.

#### State

##### *Sustainable Communities and Climate Protection Act*

The Sustainable Communities and Climate Protection Act (SB 375) was signed into law on September 30, 2008. The SB 375 regulation provides incentives for cities and developers to bring housing and jobs closer together and to improve public transit. The goal behind SB 375 is to reduce automobile commuting trips and length of automobile trips, thus helping to meet the statewide targets for reducing greenhouse gas emissions set by the California Global Warming Solutions Act of 2006 (AB 32). SB 375 requires each metropolitan planning organization to add a broader vision for growth, called a “sustainable communities strategy” (SCS), to its regional transportation plan. The SCS must lay out a plan to meet the region’s transportation, housing, economic, and environmental needs in a way that enables the area to lower greenhouse gas emissions. The SCS should integrate transportation, land use, and housing policies to plan for achievement of the regional emissions target.

##### *Senate Bill 743*

SB 743 was signed in 2013, with the intent to “more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions.” When implemented, “traffic congestion shall not be considered a significant impact on the environment” within California Environmental Quality Act (CEQA) transportation analysis.

OPR was charged with developing new guidelines for evaluating transportation impacts under CEQA using methods that no longer focus on measuring automobile delay and level of service (LOS). This change at the state level recognizes the unintended consequences of using LOS as an impact metric, which results in understating potential transportation impacts in greenfield areas and discouraging more sustainable infill projects and active transportation projects. SB 743 directs agencies to develop new guidelines that use a

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transportation performance metric which will help promote: the reduction of greenhouse gas emissions, the development of multimodal networks, and a more sustainable diversity of land uses.

OPR issued proposed updates to the CEQA guidelines in support of these goals in November 2017 and a supporting Technical Advisory in December 2018. The updates establish vehicle miles travelled (VMT) as the primary metric for evaluating a project's environmental impacts on the transportation system. The changes to CEQA guidelines Section 15064.3 to implement SB 743 were certified by the State in December of 2018. In July 2020, the City of Long Beach adopted new Traffic Impact Analysis (TIA) Guidelines which identify VMT as the metric for CEQA transportation analysis.

Consistent with SB 743, the California Court of Appeal held that traffic impacts based on level of service (LOS) cannot be considered a significant impact on the environment under CEQA. In *Citizens for Positive Growth & Preservation v. City of Sacramento* (2019), the court stated that in enacting Public Resources Code section 21099, the legislature directed that traffic analyses prepared to comply with CEQA move away from LOS to encourage infill development and focus CEQA's traffic analysis on potential traffic-related environmental impacts, rather than inconvenience associated with traffic congestion. Section 21099(b)(2) says that automobile delay described solely by LOS is not "a significant impact on the environment pursuant to [CEQA] except in locations specifically identified in the guidelines." As described above, the Secretary of the Natural Resources Agency promulgated and certified CEQA Guidelines Section 15064.3 to implement Public Resources Code section 21099(b)(2) in 2018. Therefore, traffic impacts based on LOS cannot be considered a significant impact on the environment under CEQA.

#### *Department of Transportation*

Caltrans, the California Department of Transportation, is charged with planning and maintaining state routes, highways, and freeways. Caltrans is the owner/operator for SR-103 in the study area. Caltrans has developed transportation impact analysis guidelines for use when assessing state facilities, "Guide for the Preparation of Traffic Impact Studies" (2002).

### Regional

#### *SCAG RTP/SCS*

The Southern California Association of Government's (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) provides a regional transportation plan for six counties in Southern California: Orange, San Bernardino, Riverside, Los Angeles, Ventura, and Imperial. The primary goal of the RTP is to increase mobility options and achieve a more sustainable growth pattern for the region.

On May 7, 2020, SCAG's Regional Council adopted Connect SoCal (2020-2045 RTP/SCS) for federal transportation conformity purposes only. The Regional Council will consider approval of Connect SoCal in its entirety and for all other purposes within 120 days from May 7, 2020. On September 4, 2020, the SCAG's Regional Council formally adopted the plan

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#### *Los Angeles County Metropolitan Transportation Authority*

Los Angeles County Metropolitan Transportation Authority (Metro) serves as transportation planner and coordinator, designer, builder, and operator for Los Angeles County. Metro funds improvements to all modes of transportation through several programs, including the Transportation Improvement Program (TIP), the Congestion Management Program (CMP), and Bicycle Transportation Strategic Plan. Metro operates rail and bus transit services throughout Los Angeles County, including the City of Long Beach.

#### Local

##### *General Plan Mobility Element*

The City of Long Beach Mobility Element outlines the vision, goals, policies, and implementation measures required to improve and enhance the City of Long Beach's local and regional transportation system. The vision for the future of City's transportation system includes:

- Flexible, convenient, affordable, and energy-efficient transportation options.
- Mobility practices that maintain and enhance safety while strengthening community, sense of place, urban design, and the natural environment.
- The most efficient and convenient mode of travel for any particular trip.
- Innovation and appropriate transportation technology.
- Professional standards in transportation planning and traffic engineering, with safety as the highest priority.
- Land use planning integrated with a multimodal mobility network, providing people with options to choose various forms of convenient transportation.
- Mobility systems that are planned, maintained, and operated consistent with the principles of complete streets, active living, and sustainable community design.

The mobility element proposes several "bold moves" to realize the City's vision, including those detailed here:

- **Balance the needs of all mobility users.** Goals, policies, and implementation measures would be designed to create a system of complete streets that support and encourage all mobility users, regardless of age or ability, including pedestrians, bicyclists, transit riders, motorists, and truckers. Some streets would be redesigned to create corridors that prioritize walking, bicycling, and/or transit services (that is, "street character change"). On street segments where automobile travel is not emphasized or where intersection or roadway widening is not practical, the City may accept a level of service below its standard of LOS "D" in exchange for pedestrian, bicycle, and/or transit improvements.
- **Implement a context-sensitive and multimodal approach to street planning and design.** In the past, the City of Long Beach has classified streets by their function rather than their context. A context-sensitive

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street classification system categorizes a jurisdiction's streets by both function and community context, taking into account all road users and the character of adjacent properties and buildings. This approach will help create a more balanced mobility system; give people more transportation choices; and help integrate mobility, land use, and urban design for better "placemaking."

- **Increase the efficiency of the roadway and highway system through innovative facilities and programs.** Long Beach is a nearly built-out city with a developed mobility network. As the population grows, there will be limited opportunities to acquire additional right-of-way for vehicular traffic. Instead, future improvements will be aimed at making the mobility network more efficient by encouraging other modes of transportation and by using innovation and technology to improve the flow of traffic along corridors.
- **Provide multimodal connectivity to create a seamless mobility system.** The City's goal is a seamless link between all modes of transportation so that trips are not disrupted by system delays, burdensome ticketing procedures, unreasonable waiting times, and extended loading and unloading periods.
- **Support active transportation and active living.** Active transportation uses the energy of the human body to get from place to place—such as walking, bicycling, roller skating, and skateboarding. By making active transportation a viable option for everyday travel, the City of Long Beach can help alleviate roadway congestion, reduce greenhouse gas emissions, improve physical health and wellness, and reduce obesity rates.

The Mobility Element's Mobility Plan outlines goals, strategies, and policies to achieve the Element's vision. The Mobility Plan is structured into three sections that focus on the mobility of people, goods, and resources.

#### *Long Beach Bicycle Master Plan*

The City's Bicycle Master Plan was adopted in February 2017 as a citywide planning document aimed at increasing ease, comfort, and safety of bicycling for all destinations as part of daily life, such as work, public transit, errands, school, travel, and recreation. The Bicycle Master Plan aims to make Long Beach the most bicycle-friendly city in the United States. The City aims to increase bicycle trips to:

- 10 percent of all trips in 10 years
- 20 percent of all trips in 20 years
- 30 percent of all trips in 30 years

The larger goal is to have fewer than 50 percent of trips made by solo drivers by 2040. The Bicycle Master Plan expands upon the City's General Plan Mobility Element by providing further details on bicycle planning and design.

#### *CX3 Pedestrian Plan*

The CX3 Pedestrian Plan is a technical appendix to the Mobility Element and provides a framework for encouraging physical activity by active transportation in 10 neighborhoods in Long Beach, including the Plan



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Area. The intention of the CX3 Pedestrian Plan is twofold: (1) Assess existing conditions of the CX3 areas and identify paths for improving the pedestrian environment, and (2) Lay out a framework of tools, project types, policies, and programs for improving the CX3 neighborhoods.

#### *Long Beach Municipal Code*

The City's municipal code includes regulations related to pedestrian, bicycle, and vehicular mobility:

- Chapter 10.08 (Traffic Control Devices)
- Chapter 10.58 (Pedestrians)
- Chapter 10.48 (Bicycles)

#### *Terminal Island Freeway – Green TI Plan*

The City developed and adopted the Green TI Plan in 2015, a plan for transforming the Terminal Island Freeway (or SR-103), which abuts the western Plan Area boundary (see Figure 3-3, *Aerial Photograph*), into a local-serving road with an associated greenbelt. The Green TI Plan calls for decommissioning the freeway to a local-serving road, which includes increasing open space and buffering the Plan Area and other developments along the freeway from air, noise, light, and visual pollution.

#### *City of Long Beach Traffic Impact Analysis Guidelines*

The City of Long Beach Traffic Impact Analysis (TIA) Guidelines establish procedures to ensure consistency of analysis and the adequacy of information presented regarding the proposed development project. The TIA guidelines were recently updated and approved by Planning Commission on June 4, 2020. The updated TIA includes the significance criteria, thresholds of significance, screening criteria, and methodologies related to VMT for analysis in CEQA transportation studies in the City. With implementation of the SB 743 guidelines, the LOS analysis requirements will not affect the CEQA transportation impacts analysis and will be fully separate from CEQA except where deemed necessary to determine whether a proposed project would result in hazards due to geometric design features or inadequate emergency access.

### 5.14.1.2 EXISTING CONDITIONS

#### **Study Area**

The Plan Area is within the Westside area of the City of Long Beach. The Plan Area is bound by SR-103 (Terminal Island (TI) Freeway) to the west, Cabrillo High School to the north and east, and warehousing industrial uses and 20th Street to the south. Further to the south is SR-1 (Pacific Coast Highway (PCH)), which provides primary access to the Plan Area from San Gabriel Avenue, Technology Place, and 20th Street. No vehicular access is provided to Cabrillo High School to the north or east, but students who live in Plan Area are allowed to walk directly into Cabrillo High School via a pedestrian gate without needing to walk down to PCH.

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#### *Existing Street System*

Major roadways serving the study area include PCH in the east/west direction and Santa Fe Avenue in the north/south direction. I-710 (the Long Beach Freeway) lies 0.75 mile to the east of the Plan Area. This freeway provides regional access to and from the study area and Downtown Long Beach to the south and the San Gabriel Valley to the north. I-405 (the San Diego Freeway) lies approximately 2.25 miles to the north of the Plan Area. This freeway also provides regional access to and from the study area and the South Bay region to the northwest and Orange County to the southeast. Lastly, SR-103 lies just west of the site. This short freeway provides local access to and from the study area and the Los Angeles/Long Beach port complex to the south and Willow Street to the north.

The characteristics of the major roadways serving the study area are described below. The street descriptions include the designation of the roadway under the Mobility Element, An Element of the General Plan adopted by the Long Beach City Council in October 2013. The Mobility Element states the City's street standards to create a better balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access. The roadways in the study area are defined as follows in the Mobility Element.

- **Freeways** – High-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- **Regional Corridor** – Design for intraregional and intercommunity mobility, these corridors emphasize traffic movement and include signalized pedestrian crossings. The adjacent land uses should provide continuous mixed-use and commercial land uses with adequate off-street parking to minimize dependency on on-street parking.
- **Boulevard** – Characterized by a long-distance, medium-speed corridor that traverses an urbanized area, boulevards consist of four or fewer vehicle travel lanes, a balanced multimodal function, landscaped medians, on-street parking, narrower travel lanes, more intensive land use oriented to the street, and wide sidewalks. Buildings uniformly line the edges.
- **Major Avenue** – A major avenue serves as the major route for the movement of traffic within the City as well as a connector to neighboring cities. Most traffic using a major avenue will end the trip within the City (as opposed to through-traffic). As such, design treatment and traffic operation should give preference to this type of traffic. Long corridors with typically four or more lanes, avenues may be high-transit ridership corridors. Goods movement is typically limited to local routes and deliveries.
- **Minor Avenue** – A minor avenue provides for the movement of traffic to neighborhood activity centers and serves as a route between neighborhoods. Avenues serve as a primary bicycle route and may serve local transit routes as well.
- **Neighborhood Connector** – A neighborhood connector street serves trips generated in surrounding or adjacent neighborhoods and should discourage through-trips that do not end within the neighborhood. Goods movement is restricted to local deliveries only.

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- **Local Street** – Local streets primarily provide access to individual residential parcels. The streets are generally two lanes with on-street parking, tree planting strips, and sidewalks. Traffic on a local street should have a trip end on that street, or on a connecting local street, or to a connector.

### *Regional and Local Access*

Listed below are the primary freeways and streets that provide regional and local access to the study area.

#### *Freeways and Local Streets*

- **I-710 (the Long Beach Freeway)** runs in the north/south direction, extending from Alhambra to Long Beach. At PCH, I-710 provides three lanes in each direction. I-710 is approximately 0.75 miles to the east of the Plan Area. Access to the Specific Plan's study area is provided by ramps at PCH.
- **I-405 (the San Diego Freeway)** runs in the northwest/southeast direction, extending from the Westside of Los Angeles County to Orange County. At Santa Fe Avenue, I-405 provides five lanes in each direction. I-405 is approximately 2.3 miles to the north of the Plan Area. Interchanges providing access to the Specific Plan's study area include Santa Fe Avenue and Alameda Street.
- **SR-103 (the Terminal Island (TI) Freeway)** is a short freeway stub that runs in the north/south direction, extending from the Ports of Los Angeles and Long Beach to Willow Street. At PCH, SR-103 provides two lanes in each direction. SR-103 is adjacent to the west of the Plan Area. North of PCH, SR-103 is under City of Long Beach jurisdiction and is designated as a Boulevard. Access to the Plan Area is provided by an interchange serving PCH and the Specific Plan driveway intersection at SR-103 northbound Ramps/20th Street and San Gabriel Avenue.
- **Pacific Coast Highway (PCH)** is designated as a Regional Corridor located south of the Plan Area and has two to three lanes in each direction. Parking is generally permitted on both sides of the street. Left-turn pockets are present at all intersections in the study area via a two-way left-turn lane (TWLTL).
- **20th Street** is designated as a private Local Street located adjacent to the Plan Area to the south and has one lane in each direction. Parking is not permitted on both sides of the street.
- **Technology Place** is designated as a private Local Street located south of the Plan Area and has one lane in each direction. Parking is not permitted on both sides of the street. Technology Place also runs north/south and provides access from 20th Street to PCH.
- **Willow Street** is designated as a Boulevard located north of the Plan Area and has two lanes in each direction. Parking is generally permitted on both sides of the street. Left-turn pockets are present at all intersections in the study area via a landscaped median.
- **Williams Street** is an internal local street within the Plan Area and has one lane in each direction. Parking is permitted on both sides of the street.

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#### *North-South Streets*

- **San Gabriel Avenue** is designated as a Local Street located on the western edge of the Plan Area and has one lane in each direction. Parking is not permitted on both sides of the street outside the Plan Area. San Gabriel Avenue continues into the Plan Area via its main entry driveway gate, and parking is permitted on both sides of the street.
- **River Avenue** is an internal local street within the Plan Area and has one lane in each direction. Parking is generally permitted on both sides of the street. River Avenue turns into Technology Place at the exit only driveway of the Plan Area.
- **Santa Fe Avenue** is designated as a Major Avenue located east of the Plan Area and has two lanes in each direction. Parking is permitted on both sides of the street. Left-turn pockets are present at all intersections in the study area via a landscaped median.
- **Judson Avenue** is designated as a Local Street located south of the Plan Area and has one lane in each direction. Parking is permitted on both sides of the street.
- **Harbor Avenue** is designated as a Neighborhood Connector located east of the Plan Area and has one lane in each direction. Parking is permitted on both sides of the street.
- **Magnolia Avenue** is designated as a Minor Avenue south of PCH and a Neighborhood Connector north of PCH. It has one lane in each direction and parking is permitted on both sides of the street. Left-turn pockets are present at all intersections in the study area.
- **Alameda Street (SR-47)** is located within the City of Los Angeles and City of Carson. It is designated as a Boulevard II in Los Angeles and a Major Highway in Carson. Alameda Street is located west of the Plan Area on the east and has three lanes in each direction. Parking is not permitted on both sides of the street.

#### *Public Transit Service*

The Plan Area is served by a number of public transit lines, and contains the West Long Beach Transit Center, or CVC Transit Center. Figure 2 of the Specific Plan's Transportation Impact Study (TIS; see Appendix J) shows the various transit routes providing service in the study area. The Plan Area currently has a bus stop at the Williams Street and River Avenue intersections. This bus stop serves the terminus of Long Beach Transit Lines 171, 175, and 176. PCH is also served by the aforementioned routes and Torrance Transit Route 3. Torrance Transit Route R3 provides parallel rapid bus service on PCH with a stop further from the Plan Area. Santa Fe Avenue is served by Long Beach Transit Routes 191 and 192 (see Figure 3-9, *Local and Regional Transit Service*). Detailed transit service information is provided in Table 1 of the TIS.

The CVC Transit Center, developed as part of Plan Area's Anchor Place development began service in 2018. As a part of the transit center development, two existing Long Beach Transit bus routes (Long Beach Transit 171 and 176) were rerouted into the Plan Area where they begin and end their respective routes at the CVC Transit Center. The CVC Transit Center is centrally located in the Plan Area at the southwest corner of Williams Street and River Avenue (see Figure 3-9, *Local and Regional Transit Service*). The CVC Transit Center has real time

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bus location information so that residents can better plan their trips. The CVC Transit Center also includes seating, shelter, secured bike parking, restrooms, and tranSMART. The CVC Transit Center provides space for up to three buses.

#### *Bicycle and Pedestrian Facilities*

Figure 3 of the TIS shows citywide existing and planned designated bicycle facilities in the Plan Area. Currently there are few existing bicycle facilities within 0.5-mile of the Plan Area. Pacific Coast Highway is a designated bicycle route and Santa Fe Avenue, Hill Street, and Harbor Avenue are proposed bike routes.

Pedestrian sidewalks and curb ramps are present in the Specific Plan's study area, which connect the Plan Area to PCH and other destinations. However, sidewalks are not present on San Gabriel Avenue, PCH west of Technology Place/Judson Avenue, and the north side of 20th Street adjacent to the Plan Area. A full sidewalk network is existing within the Plan Area. Because the Plan Area has controlled access, pedestrian entry/exit is limited to gates at both driveway intersections. Additional pedestrian access is provided to Cabrillo High School during school hours only for students who live at Century Villages at Cabrillo.

### 5.14.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).
- T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- T-4 Result in inadequate emergency access.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold T-3
- Threshold T-4

These impacts will not be addressed in the following analysis.

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### 5.14.3 Environmental Impacts

#### 5.14.3.1 METHODOLOGY

##### Level of Service

According to the City of Long Beach adopted new TIA Guidelines, LOS will still be reported for non-CEQA purposes. The LOS analysis of the TIS was prepared in accordance with the Methodologies and Assumptions Memorandum, which was approved by the City of Long Beach in February 2020. The LOS analysis is not included in this transportation section but is fully analyzed in the TIS (Appendix J of this DEIR).

##### VMT Analysis

The City of Long Beach and OPR Technical Advisory describes the four components of a VMT analysis necessary to comply with the new CEQA guidelines:

1. **VMT Screening and Qualitative Review:** The first step is to determine when a VMT analysis is required. Long Beach and OPR recommends that projects can be screened from a VMT analysis based on their size, location, and/or accessibility to transit.
2. **VMT Analysis Methodology:** If a project is not screened out from requiring a VMT analysis, the City can use the regional travel demand model to estimate a project's VMT. City of Long Beach's TIA Guidelines states that VMT be reported as "Home-Based VMT" per capita for residential projects and "Home-Based Work VMT" per employee for the employees of a project site. Home-Based VMT includes all vehicle roundtrips originating from the residence of the trip-maker. Home-Based Work VMT includes only vehicle roundtrips between the residence of the trip-maker and their place of work.
3. **VMT Impact Thresholds:** The City has discretion to develop and adopt its own VMT thresholds, or rely on thresholds recommended by other agencies, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence. Long Beach states that projects with VMT exceeding 15 percent below existing VMT per capita or per employee when compared to the LA Countywide average of these metrics may indicate project impacts.
4. **VMT Mitigation:** The types of mitigation that affect VMT are those that reduce the number of single-occupant vehicles generated by a project. Mitigation can be accomplished by altering the proposed land uses or by implementing transportation demand management (TDM) measures.

#### 5.14.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.14-1:** Development pursuant to the Specific Plan would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities [Threshold T-1]

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**Impact Analysis:** This section discusses the Specific Plan's consistency with the Long Beach General Plan Mobility Element, Long Beach Bicycle Master Plan, CX3 Pedestrian Plan, the Municipal Code, and Green TI Plan.

#### *General Plan Mobility Element*

The Specific Plan includes the development of a multi-modal transportation system that encourages active forms of transportation and public transit while providing adequate accommodations for vehicles. This supports the Mobility Element's goal of establishing an efficient, balanced, multi-modal transportation network. The Specific Plan would support the Mobility Element's strategies that focus on complete streets, reconfiguring streets to emphasize their modal priorities, and reducing the environmental impacts of the transportation system.

For example, the Specific Plan would be consistent with and support the following policies:

- Policy 1-9: Increase mode shift of transit, pedestrians, and bicycles;
- Policy 2-1: Design streets to have a specific role and identity that contributes to the neighborhood's character, while supporting specific functional requirements;
- Policy 2-11: Consider every street in Long Beach as a street that bicyclists and pedestrians will use.
- Policy 2-13: Continue to use innovative designs to expand and enhance the bikeway network and increase public safety

The Specific Plan includes a multimodal mobility plan and roadway network, which would connect to existing mobility facilities on- and off-site. The mobility plan under the Specific Plan emphasizes bicycling and walking as the primary modes of transportation, supports public transit use, and improves vehicular and non-vehicular mobility throughout the Plan Area. Automobile movement will become more efficient while transitioning to be secondary to the active transportation network. This would be accomplished through a system of three Specific Plan street classifications: Gateway Street; Neighborhood Street; and Wellness Trail. These street classification systems are similar to the classifications defined in the City's Mobility Element that is based on a context-sensitive street classification system categorizing streets into a hierarchy based on function and community context. The City's street classification system is discussed in detail in Section 5.14.1.2. Williams Street would be the only Gateway Street and would serve as the primary entrance to the Plan Area. In addition to Williams Street, vehicle access would be allowed on Neighborhood Streets. The Wellness Trail would only allow active transportation and serve as an emergency vehicle access. Therefore, general vehicle circulation within the Plan Area would be limited to the Gateway and Neighborhood Streets. In addition to vehicle access, these street types would include sidewalks and parkways to support active transportation. The wellness trails will provide a safe, separate active transportation network with limited vehicular interruptions. New dedicated

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bicycle facilities, wider walkways and separate trails will improve safety and accessibility. Refer to Figure 3-7, *Street Classification Plan*, which shows the Plan Area's street classifications, and Figure 3-8, *Neighborhood Connections*, which shows the Plan Area's nonvehicular network. Landscaping and bicycle and pedestrian amenities (such as bike racks) would further support complete streets and active transportation on site.

Two existing Long Beach Transit bus routes have a stop at the CVC Transit Center within the Plan Area (see Figure 3-9, *Local and Regional Transit Service*). The bus routes extend into the community, reaching the Veterans Hospital, Long Beach State University, and regional shopping centers. Additional bus routes operate near the Plan Area as described under Section 5.14.1.2. The Specific Plan's circulation system would provide convenient access to the CVC Transit Center, which encourages public transit use. As shown in Figure 3.8 and Figure 3.9, the Specific Plan would continue to provide pedestrian, bicycle, public transportation, and vehicle access to the surrounding community. A vanpool program will further expand and diversify transit service.

Further, the Specific Plan would be consistent with Policy 2-2, "Design the character and scale of the street to support its street type and place-type designation and overlay networks (for example, create a bike boulevard or bicycle-friendly retail district, transit street, or green street)" and Policy 2-7, "Treat streets as an important part of the public open space system, and integral part of the City's urban forest." The Specific Plan's street system and transit opportunities described above and building design and siting (described in Section 5.1, *Aesthetics*) would encourage a pedestrian-scale environment that would support streets as part of public open space. The Specific Plan includes measures to increase the Plan Area's tree canopy and provides landscaping along parkways and streets, providing a safe and inviting pedestrian network.

The Specific Plan would reduce environmental impacts of the Plan Area's transportation network by encouraging active transportation, providing a walkable neighborhood with linkages to public transit and the surrounding community, and by promoting carsharing and carpools. The Specific Plan would support Policy 5-2, which states "Reduce vehicle miles traveled (VMT) and vehicle trips through the use of alternative modes of transportation and TDM." The Specific Plan includes a Transportation Demand Management program that would promote alternative and shared modes of transportation and reduce the dependence of vehicles. For example, employers within the Plan Area will be encouraged to arrange flexible work programs in order to mitigate traffic during peak rush hours, as well as reduce parking demand. The Specific Plan will also offer transportation in case of emergency situations for these commuters via the Guaranteed Ride Home program, in collaboration with Metro. Transit passes will be provided free or at reduced-price to residents and employees. Accommodations for shared-use or short-term rental vehicles will be made in central locations, providing residents the flexibility of using an automobile without the obligation of owning a private vehicle. Partnerships with local businesses and community organizations can further support the transit service by providing shuttles. Vanpools can also be explored for employees and trips including groups of residents. The Specific Plan would provide carpool/shared-use vehicle parking for each non-residential and mixed-use building on site. Parking facilities would be established as part of each development under the Specific Plan. Parking would be provided in parking podiums and street parking. As such, the Specific Plan would be consistent and support the Mobility Element.



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#### *Long Beach Bicycle Master Plan*

The Specific Plan would be consistent with the Bicycle Master Plan. This also supports Mobility Element Policy 2-15, “Ensure that all new development is consistent with the applicable provisions of the Bicycle Master Plan.” The buildout under the Specific Plan would provide a comprehensive network of Wellness Trails that would generally be reserved for active forms of transportation, including bicycling (as described above). The Wellness Trails would connect residential and non-residential uses to public transportation facilities onsite and with the wider community (see Figure 3-8, *Neighborhood Connections*). The Wellness Trails encourage pedestrian and bicycle safety as it would limit vehicle use of these trails to emergency vehicles only. The Specific Plan would also support bicycling by providing bicycle facilities (such as bike racks) and require secured bicycle parking. Given the Specific Plan’s increased connectivity, residents would be able to bike between different uses onsite. Refer to Section 5.9, *Land Use and Planning*, for an additional discussion of the Specific Plan’s consistency with the Long Beach Bicycle Master Plan.

#### *CX3 Pedestrian Plan*

The CX3 Pedestrian Plan is a technical appendix to the Mobility Element, which provides a framework for encouraging physical activity by active transportation in 10 neighborhoods in Long Beach, including the Plan Area. The CX3 Pedestrian Plan provides a Pedestrian Toolkit with design strategies for pedestrian mobility, such as sidewalks, lighting, driveways, landscaping, trees, street furniture and on-street parking, intersections, and crosswalks (among others). The Specific Plan contains various pedestrian network enhancements that would encourage pedestrian activities and increase safety (as described above and with Chapter 5.1, *Aesthetics*). Pedestrian network enhancements would occur within and around the edge of the Plan Area to encourage more physical activity by active transportation. The Specific Plan would increase the number of pedestrian connections to areas outside the Plan Area. The Specific Plan would add new sidewalks and street trees within the Plan Area and along the perimeter as well as improved street and pedestrian lighting that aim to enhance connectivity to the existing pedestrian network. Pedestrian facilities would comply with ADA regulations and support universal access. The Specific Plan does not propose to narrow sidewalks or remove streetscape amenities or features. The locations of driveways are intended to minimize disruptions to the pedestrian right-of-way. The Specific Plan will provide short-term and long-term bicycle parking in accordance with LBMC requirements. The Specific Plan would contribute to the overall walkability of the City.

#### *Terminal Island Freeway – Green TI Plan*

The Green Terminal Island (TI) Plan would transform the Terminal Island Freeway into a local serving road with an associated greenbelt. While the Green TI Plan is an adopted plan, it still needs considerably more analysis and engagement with stakeholders in the adjacent cities of Los Angeles and Carson for implementation. As the Terminal Island Freeway right-of-way north of the Pacific Coast Highway interchange is owned by the City of Long Beach, negotiations and coordination of this future connection will take place between the Villages at Cabrillo and multiple departments within the City.

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#### *Conclusion*

As substantiated above, the Specific Plan would not conflict with the City's General Plan Mobility Element, Long Beach Bicycle Master Plan, CX3 Pedestrian Plan, and Green TI Plan. Therefore, the Specific Plan would result in a less than significant impact.

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#### **Impact 5.14-2: Development pursuant to the Specific Plan would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) [Threshold T-2]**

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**Impact Analysis:** VMT is heavily dependent on the land uses and location of a project. For example, a development site located in an urban area will typically have lower VMT because people have more options to walk, bike, take transit, or drive shorter distances to nearby destinations in comparison to a suburban or rural environment where most people drive longer distances for their everyday work and household needs. Therefore, the City of Long Beach has provided guidance in the TIA Guidelines related to several screening thresholds for projects that would generate low VMT as described below.

#### **Project Type Screening**

Projects that generate less than 500 daily trips may be screened from conducting a VMT analysis as they may be presumed to have a less than significant impact. Local serving retail uses less than 50,000 square feet per store may also be presumed to have a less than significant VMT impact absent substantial evidence to the contrary. This is because local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel. All the Specific Plan's retail uses are less than 50,000 square feet, and the total retail area proposed under the buildout of the Specific Plan (i.e., remaining and proposed retail) is 22,850 sf. Therefore, the retail component of the Specific Plan is identified as local serving and screened from VMT analysis. In addition, the retail component of the Specific Plan is serving the residential population of the Plan Area and is not expected to generate customer trips from outside the Plan Area.

Projects that contain a high level of affordable housing may also be screened from conducting a VMT analysis. According to CEQA Guidelines Section 15064.3, subdivision (b), residential projects (or the residential portion of mixed-use projects) with 100 percent affordable dwelling units will be presumed to have a less than significant transportation impact. Because the Specific Plan proposes 100 percent affordable housing, the residential component of the Specific Plan is screened (exempt) from VMT analysis.

#### **Transit Priority Area Screening**

Projects located within Transit Priority Areas (TPAs) or High-Quality Transit Areas (HQTAs) as determined by the most recent SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) may also be exempt from VMT analysis as they are presumed to result in less than significant impacts. TPAs are defined by Public Resources Code Section 21099 as a 0.5-mile radius around an existing or planned major transit stop or an existing stop along a high-quality transit corridor (HQTC). Major transit stops are defined by Public Resources Code Section 21064.3 as an existing rail or bus rapid 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.

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Based on OPR guidance, projects located within a TPA may be presumed to have a less than significant impact absent substantial evidence to the contrary. However, this presumption may not be appropriate if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75
- Includes more parking for use by residents, customers, or employees than required by the City (unless additional parking is being provided for design feasibility, such as completing the floor of a subterranean or structured parking facility, or if additional parking is located within the project site to serve adjacent uses)
- Is inconsistent with the applicable SCS (as determined by the City)
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units

The closest Major Transit Stop to the Plan Area is the intersection of the Long Beach Transit (LBT) bus routes 171/175 and 191/192. The Specific Plan currently contains an onsite bus stop which serves as the terminus for LBT bus routes 171/175 and the Specific Plan is within 0.5-mile of the 191/192 bus stops on Santa Fe Avenue. According to Figure 4 in the TIA Guidelines, the entirety of CVC is in a TPA (see also Figure 4-1, *Long Beach Transit Priority Areas*). In addition, the Specific Plan buildout has a FAR over 0.75 and is not proposed to provide more parking than is required. The CVC Specific Plan will result in a net increase of over 500 affordable units, and by locating multifamily housing in a transit-rich area the Project is consistent with the goals of the SCAG RTP/SCS. Refer to Section 5.9, *Land Use and Planning*, for an additional discussion of the Specific Plan's consistency with SCAG's RTP/SCS. According to the Specific Plan, transportation demand management (TDM) measures would be put in place to further reduce parking demand and VMT, such as employee flexible work programs, subsidized transit passes, and carpool/carshare programs. Therefore, the Specific Plan is screened from VMT analysis.

### Low VMT Area Screening

Residential and office projects located within a low VMT generating area and have similar characteristics to the surrounding development (such as density or mix of uses) may be presumed to have a less than significant impact absent substantial evidence to the contrary.

The SCAG Regional Travel Demand Model, which includes Los Angeles County and the City of Long Beach, is the most appropriate model to use for VMT forecasting within the City of Long Beach. The TIS used the SCAG model to measure the VMT performance for the Specific Plan's traffic analysis zone (TAZ) during Base Year 2016 conditions. TAZs are geographic polygons similar to Census block groups used to represent areas of homogenous travel behavior. The VMT metrics for the Specific Plan's TAZ are discussed in further detail below as part of the screening for residential and office land uses.

Low VMT areas for residential projects are defined as TAZs that generate VMT on a per capita basis that is at least 15 percent lower than the Los Angeles Countywide average. Low VMT areas for office projects are defined as TAZs that generate VMT on a per employee basis that is at least 15 percent lower than the countywide average. According to the Long Beach TIA Guidelines, the average Home-Based VMT per capita and Home-

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Based Work VMT per employee for the Specific Plan's TAZ are greater than 115 percent and within 85-115 percent of the Los Angeles Countywide average, respectively. The Specific Plan's TAZ also covers larger industrial buildings between San Gabriel Avenue and Technology Place to the south of the Plan Area, Hudson Elementary School, Cabrillo High School's athletic fields; and maintenance/facilities yards for Long Beach Unified School District. The Specific Plan's TAZ does not qualify as a Low VMT area.

### Conclusion

Based on the screening criteria recommended by the City of Long Beach, all components of the Specific Plan are of the type that are presumed to be less than significant given the nature of the use. Therefore, the Specific Plan would have a less than significant VMT impact due to its location within a transit priority area and the Specific Plan being a 100 percent affordable housing project with neighborhood-serving retail less than 50,000 sf in area. Nevertheless, the Specific Plan proposes transportation demand management measures as a project design feature.

### 5.14.4 Cumulative Impacts

As substantiated above, the Specific Plan would comply with applicable plans, ordinances, and policies that guide mobility. Similar to the Specific Plan, each related project would be expected to show its consistency with existing programs, plans, ordinances, and policies that address the City's circulation system (such as the City's Mobility Element, Long Beach Bicycle Master Plan, CX3 Pedestrian Plan, and Green TI Plan).

The nearest related project to the Plan Area is CVC Phase VI. CVC Phase VI is a separate project from the Specific Plan, to be completed before the Specific Plan is built out. No significant cumulative impacts are anticipated to which both the Specific Plan and the related projects would contribute in regard to City transportation policies or standards adopted to protect the environment and support multimodal transportation options. Therefore, the Specific Plan would not contribute to a cumulative impact.

As discussed under Impact 5.14-2, the Specific Plan is exempt from VMT analysis as it is the type of project presumed to have less than significant impacts due to the nature of its use. Similar to the Specific Plan, each related project would be required to follow the City's TIA Guidelines and OPR's Technical Advisory to determine if a VMT analysis is required. If a VMT analysis is required, the related project would be required to follow the City's TIA Guidelines and OPR's Technical Advisory to analyze the project's VMT. As discussed above, the Specific Plan is exempt from the VMT analysis, and therefore, would not contribute to a cumulative impact.

### 5.14.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.14-1 and 5.14-2.

### 5.14.6 Mitigation Measures

No mitigation measures are required.

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### 5.14.7 Level of Significance After Mitigation

Implementation of the Specific Plan would result in less than significant transportation impacts, and no mitigation measures are required.

### 5.14.8 References

Fehr & Peers. 2020, July. Century Villages at Cabrillo Specific Plan Draft Transportation Impact Study.

Long Beach, City of. 2017a, February. Bicycle Master Plan.

<http://www.longbeach.gov/lbds/planning/advance/general-plan/mobility/bicycle/>

2017b, February. CX3 Pedestrian Plan. <http://www.longbeach.gov/lbds/planning/advance/general-plan/mobility/cx3-pedestrian/>

2015, December. Terminal Island Transition Plan – Green TI.

[http://www.longbeach.gov/globalassets/lbds/media-library/documents/orphans/green-ti/160310\\_final\\_green\\_ti\\_reduced\\_size-a](http://www.longbeach.gov/globalassets/lbds/media-library/documents/orphans/green-ti/160310_final_green_ti_reduced_size-a)

2013, October. General Plan Mobility Element.

[http://www.longbeach.gov/globalassets/lbds/media-library/documents/orphans/mobility-element/320615\\_lbds\\_mobility\\_element\\_web](http://www.longbeach.gov/globalassets/lbds/media-library/documents/orphans/mobility-element/320615_lbds_mobility_element_web)

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### 5.15 TRIBAL CULTURAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Century Villages at Cabrillo Specific Plan (Specific Plan) to impact tribal cultural resources in the City of Long Beach—specifically, in the area covered by the Specific Plan (Plan Area). Tribal cultural resources include landscapes, sacred places, or objects with cultural value to a California Native American Tribe. Other potential impacts to cultural resources (i.e., prehistoric, historic, and disturbance of human remains) are evaluated in Section 5.3, *Cultural Resources*, and impacts to paleontological resources are addressed in Section 5.5, *Geology and Soils*.

The analysis in this section is based in part on the following source:

- *Cultural and Paleontological Resources Assessment Report*, Cogstone, November 2020

A complete copy of this technical report is included in Appendix D of this DEIR.

#### 5.15.1 Environmental Setting

##### 5.15.1.1 REGULATORY BACKGROUND

Federal and state laws, regulations, plans, or guidelines related to archeological resources that are applicable to the Specific Plan are summarized below.

##### Federal

###### *Archaeological Resources Protection Act*

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites that are on federal and Indian lands.

###### *Native American Graves Protection and Repatriation Act*

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony to lineal descendants and culturally affiliated Indian tribes.

##### State

###### *California Public Resources Code*

Archaeological resources are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. In addition, cultural resources are recognized as a non-renewable resource and therefore receive protection under the California Public Resources Code and CEQA.

- California Public Resources Code 5097.9–5097.991 provides protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the Native American

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### TRIBAL CULTURAL RESOURCES

Heritage Commission (NAHC). It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

- California Public Resources Code 5097.9 states that no public agency or private party on public property shall “interfere with the free expression or exercise of Native American Religion.” The code further states that “No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine... except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, except for parklands larger than 100 acres.”

#### *California Health and Safety Code*

The discovery of human remains is regulated per California Health and Safety Code Section 7050.5, which states that “In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation...until the coroner...has determined...that the remains are not subject to...provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible.... The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and...has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.”

#### *California Register of Historical Resources*

The California Register of Historic Resources is the state version of the National Register of Historic Resources program (see also Section 5.3, *Cultural Resources*). It was enacted in 1992 and became official January 1, 1993. The California Register was established to serve as an authoritative guide to the state’s significant historical and archaeological resources. Resources that may be eligible for listing include buildings, sites, structures, objects, and historic districts. According to subsection (c) of Public Resources Code Section 5024.1, a resource may be listed as a historical resource in the California Register if it meets any of the four National Register criteria.

#### *Senate Bill 18*

Existing law provides limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.



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Senate Bill 18 (SB 18) was signed into law in September 2004 and went into effect on March 1, 2005. It places requirements upon local governments for developments within or near “traditional tribal cultural places” (TTCP). SB 18 requires local jurisdictions to provide opportunities for involvement of California Native Americans tribes in the land planning process for the purpose of preserving TTCPs. The Final Tribal Guidelines recommend that NAHC provide written information as soon as possible but no later than 30 days after receiving notice of the project to inform the lead agency if the proposed project is determined to be in proximity to a TTCP and another 90 days for tribes to respond to a local government if they want to consult with the local government to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government council, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may include tribes listed by NAHC who have requested consultation, or it may not. If NAHC, the tribe, and interested parties agree upon the mitigation measures necessary for the proposed project, it would be included in the project’s EIR.

SB 18 requires a city or county to consult with NAHC and any appropriate Native American tribe for the purpose of preserving relevant TTCPs prior to the adoption, revision, amendment, or update of a city’s or county’s general plan. Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, the Final Tribal Guidelines advise that SB 18 requirements extend to specific plans as well, since state planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code Section 65453). In addition, SB 18 provides a new definition of TTCP, requiring a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies or the site must be shown to actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies. Previously, the site was defined to require only an association with traditional beliefs, practices, lifeways, and ceremonial activities. In addition, SB 18 law also amended Civil Code Section 815.3 and adds California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

#### *Assembly Bill 52*

The Native American Historic Resource Protection Act (Assembly Bill 52 or AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to tribal cultural resources (TCRs) into the CEQA process. Under AB 52, a tribal cultural resource is defined similar to tribal cultural places under SB 18—sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. Or the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a tribal cultural resource.

AB 52 requires TCRs to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. It requires inclusion of a new section in CEQA documents titled Tribal Cultural Resources.

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Similar to SB 18, AB 52 requires consultation with tribes at an early stage to determine whether the project would have an adverse impact on a TCR and define mitigation to protect them. Per AB 52, within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested in writing to be notified. The tribe then has 30 days of receiving the notification to respond if it wishes to engage in consultation. The lead agency must initiate consultation within 30 days of receiving the request from the tribe. Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a TCR, or a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached. Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on TCR's and discuss feasible alternatives or mitigation that avoid or lessen the impact.

#### 5.15.1.2 EXISTING CONDITIONS

##### Cultural Setting – Ethnohistory

The following ethnographic information is summarized from the Cultural and Paleontological Resources Assessment Report prepared for the Specific Plan by Cogstone (Appendix D).

Early Native American peoples of the Plan Area are poorly understood. They were replaced about 1,000 years ago by the Gabrielino (Tongva) who were semi-sedentary hunters and gatherers. The Gabrielino speak a language that is part of the Takic language family. Their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the Southern Channel Islands, in all an area of more than 2,500 square miles. At European contact, the tribe consisted of more than 5,000 people living in various settlements throughout the area. Some of the villages could be quite large, housing up to 150 people.

The Gabrielino are considered to have been one of the wealthiest tribes and to have greatly influenced tribes they traded with. Houses were domed, circular structures thatched with tule or similar materials. The best known artifacts were made of steatite and were highly prized. Many common everyday items were decorated with inlaid shell or carvings reflecting an elaborately developed artisanship.

The main food zones utilized were marine, woodland, and grassland. Plant foods were, by far, the greatest part of the traditional diet at contact. Acorns were the most important single food source. Villages were located near water sources necessary for the leaching of acorns, which was a daily occurrence. Grass seeds were the next most abundant plant food used along with chia. Various teas were made from flowers, fruits, stems, and roots for medicinal cures as well as beverages.

The principal game animals were deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, quail, dove, ducks, and other birds. Trout and other fish were caught in the streams, while salmon were available when they ran in the larger creeks. Sea mammals, fish, and crustaceans were hunted and gathered from both the shoreline and the open ocean, using reed and dugout canoes. Shellfish were the most common resource, including abalone, turban, mussels, clams, scallops, bubble shells, and others.

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The nearest Gabrielino community to the Plan Area is the Povuu'nga community, located along the San Gabriel River within the coastal region. It is one of three important Gabrielino communities within the region and was founded by refugees from the San Gabriel area. Povuu'nga most likely served as a ritual center for the Gabrielino communities of the area based on the description given by Father Geronimo Boscana. Povuu'nga was described as the birthplace of both Wewyoot (the first tomyaar), and the creator-god and spiritual being Chengüichngech. Povuu'nga is likely located on a hilltop site occupied by historic Rancho Los Alamitos in the City of Long Beach. The community existed until at least 1805 based on baptismal records from the San Gabriel and San Juan Capistrano missions. The Plan Area was not home to any known major villages. However, it is likely smaller villages and seasonal camps were present in the vicinity of the Plan Area.

### Cultural Resources

#### *Records Search Results*

A cultural resources records search of the California Historical Resources Information System (CHRIS) was conducted by Cogstone in late October 2019 at the South Central Coastal Information Center (SCCIC). The purpose of the records search was to determine the extent of previous cultural resources investigations and the presence of previously-recorded archaeological sites or historic-period (i.e., more than 50 years in age) resources in the Plan Area and within a one-mile (1600-meter) radius of the Plan Area.

The CHRIS records search indicated that seven cultural resources investigations were conducted within a one-mile radius of the Plan Area between 1975 and 2014. The records search also determined that six previously recorded resources are located within the Plan Area boundaries and an additional 18 other cultural resources are within the one-mile search radius of the Plan Area, all of which are historic built environment resources (buildings/structures). Details of cultural resources investigations and resources are presented in Section 5.3, *Cultural Resources*.

In addition to the CHRIS records search, a variety of sources were consulted by Cogstone in October 2019 to obtain information regarding the cultural context of the Plan Area. Sources included the National Register of Historic Places, the California Register of Historic Resources, California Historical Resources Inventory, California Historical Landmarks, and California Points of Historical Interest. With the exception of the California Historical Resources Inventory and Bureau of Land Management (BLM) General Land Office Records, the results of the records search of the other sources were negative. The results of the California Historical Resources Inventory records search were positive—specifically, the same six historic built environment resources (buildings/structures) identified in the CHRIS records search. BLM records showed land patents from 1851 under the Spanish Mexican Grant.

Aside from the six historic built environment resources, no other historic-era cultural resources or built environment cultural resources are present in the Plan Area. Additionally, although the general region of the Plan Area is known to have been within the territory of Gabeilino, no pre-contact or historic-era cultural resources were identified during the records search.

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#### *Sacred Lands File Search Results*

A search of the Sacred Lands File by NAHC was requested by Cogstone in late October 2019. This search was requested to determine whether there are sensitive or sacred Native American resources on or in the vicinity of the Plan Area that could be affected by the Specific Plan. Results of the Sacred Lands File records search were received by ECORP in early December 2019. The results of the Sacred Lands File records search were negative, indicating no record for the presence of Native American Sacred Lands within the Plan Area. NAHC did however, note that the absence of specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in the area. The NAHC recommended that five representatives from local Native American tribal organizations be contacted for further information regarding the Project vicinity.

#### *Historic Aerial and Map Review Results*

Cogstone conducted a review of historic-period USGS topographic maps and aerial photographs of the Plan Area and vicinity. The earliest topographic map for the Plan Area is the 1896 Downey topographic map and does not show any development in the area, but roads, trains, building structures, and a bridge are present in the vicinity. Between 1896-1922 there are no changes in development of the Plan Area. The 1923 Wilmington Quad map shows no development in the Plan Area, with additional development appearing south of the Plan Area. The 1942 Downey 15' Quad map shows no development in the Plan Area but it does show further development in the surrounding area, as well as Highway 101, which is the present day Pacific Coast Highway. The 1943 Downey shows roads developed within the Plan Area. The 1964 Long Beach 7.5' Quad shows buildings and structures in the Plan Area. Between 1964-1981, topo maps show no more changes in development. At present, 42 buildings within the boundaries of Plan Area are considered historic in age.

Although the general region of the Plan Area is known to have been within the territory of Gabrielino, no other historic-era cultural resources or built environment cultural resources are present in the Plan Area based on a review of the historic-period USGS topographic maps and aerial photographs.

#### *Field Survey Results*

Cultural field work was conducted by Cogstone archaeologists in December 2019 and consisted of an intensive systematic pedestrian survey of the Plan Area. The Plan Area was examined for the presence of cultural artifacts and features by walking the Plan Area, using 1- and 10-meter-wide transects. Although the general region of the Plan Area is known to have been within the territory of Gabrielino, no pre-contact or historic-era cultural resources were visible or observed within the boundaries of the Plan Area during the field survey.

#### **Existing Site Conditions**

The Plan Area encompasses 27 acres within a portion of a former United States Naval housing facility located at 2001 River Avenue, on the western edge of the City of Long Beach. As shown in Figure 3-3, *Aerial Photograph*, the Plan Area is fully developed and in a highly urbanized area of the City. The Plan Area has been developed and redeveloped over the past seventy years and the former Naval housing and facilities have either been rehabilitated or removed for new construction. Existing land uses in the Plan Area are comprised of a

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### TRIBAL CULTURAL RESOURCES

combination of one- and two-story rehabilitated Naval housing and new one- to five-story residential buildings, some of which are built over enclosed garages that are lined with ground floor functions including service providers and community spaces. Other improvements, features and amenities in the Plan Area include open space, recreation, and common areas; activity centers; pedestrian and bicycle paths; parking lots and drive aisles; and hardscape and landscape improvements.

### 5.15.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
- i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
  - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

#### 5.15.2.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.15-1: Grading activities have the potential to encounter unknown, buried tribal cultural resources. [Thresholds TCR-1.i and TCR-1.ii]**

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**Impact Analysis:** As stated earlier, TCR's are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that is either eligible or listed in the California Register of Historical Resources or local register of historical resources (Public Resources Code Section 21074). Additionally, the lead agency (City of Long Beach), supported by substantial evidence, chooses at its discretion to treat the resource as a TCR. As also stated above, TTCP's are Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places with cultural value to a California Native American tribe.

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Following is a discussion of the potential impacts to Native American cultural resources, including TCRs and TTCP's, as a result of development that would be accommodated by the Specific Plan.

#### Cultural Resources Records Search Results

As described in Section 5.3, *Cultural Resources*, aside from the three existing historic built environment resources, no other historic-era cultural resources or built environment cultural resources are present in the Plan Area. Furthermore, all historic aged buildings onsite were evaluated and none were recommended as eligible for listing at the local, state, or national level. Additionally, although the general region of the Plan Area is known to have been within the territory of Gabrielino, no pre-contact or historic-era cultural resources were identified during the records search.

#### Field Survey and Historical Aerials and Maps Review Results

Cultural field work was conducted by Cogstone archaeologists in December 2019 and consisted of an intensive systematic pedestrian survey of the Plan Area. The Plan Area was examined for the presence of cultural artifacts and features by walking the Plan Area, using 1- and 10-meter-wide transects. Although the general region of the Plan Area is known to have been within the territory of Gabrielino, no pre-contact or historic-era cultural resources were visible or observed within the boundaries of the Plan Area during the field survey.

Additionally, Cogstone conducted a review of historic-period USGS topographic maps and aerial photographs of the Plan Area and vicinity. As noted above, although the general region of the Plan Area is known to have been within the territory of Gabrielino, no historic-era cultural resources or built environment cultural resources are present in the Plan Area based on a review of the historic-period USGS topographic maps and aerial photographs.

#### Sacred Lands File Search Results

As noted earlier, a Sacred Lands File search was conducted by NAHC to determine if any sacred lands or traditional cultural properties had been identified on or near the Plan Area. This search was requested by Cogstone to determine whether there are sensitive or sacred Native American resources on or in the vicinity of the Plan Area that could be affected by the Specific Plan. Results of the Sacred Lands File records search were received by Cogstone in December 2019. The results of the Sacred Lands File records search were negative, indicating no record for the presence of Native American Sacred Lands within the Plan Area.

NAHC also recommended that five representatives from local Native American tribal organizations be contacted for further information regarding the Plan Area, which the City conducted under AB 52 and SB 18.

#### AB 52 Consultation Results

Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to TCRs, and reduce the potential for delay and conflict in the environmental review process. The intent of the consultations is to provide an opportunity for interested Native American contacts to work

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together with the lead agency (in this case, the City of Long Beach) during the project planning process to identify and protect TCRs.

In accordance with the provisions of AB 52, the City sent formal notification letters on November 21, 2019, to the following tribes:

- Gabrielino-Tongva Tribe;
- Gabrieleno Tongva Indians of California Tribal Council;
- Gabrielino/Tongva Nation;
- Torres Martinez Desert Cahuilla Indians;
- Gabrieleno/Tongva San Gabriel Band of Mission Indians;
- Soboba Band of Luiseno Indians; and
- Gabrieleno Band of Mission Indians – Kizh Nation.

The letter included a brief description of the Specific Plan and Plan Area location. The 30-day noticing requirement under AB 52 was completed around December 23, 2019, 30 days from the date the tribes received the notification letter. To date, none of the tribes has responded to the City's notification letter. Therefore, the AB 52 consultation process was deemed complete and no impacts to TCR's are anticipated.

However, as a matter of policy, the City requires a tribal monitor be given access to any construction site during grading activities. Typical condition of approval text is provided below. A similar condition of approval will be added to the Specific Plan approval.

Prior to the issuance of any Grading Permit for the project, the City of Long Beach Development Service Department shall ensure that the construction contractor provide access for Native American monitoring during ground-disturbing activities. This provision shall be included on project plans and specifications. The site shall be made accessible to any Native American tribe requesting to be present, provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur. The monitor(s) shall be approved by a local tribal representative and shall be present onsite during the construction phases that involve any ground disturbing activities. The monitor(s) shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the monitor(s) shall be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in the CEQA, California Public Resources Code Division 13, Section 21083.2 (a) through (k). Neither the City of Long Beach, project applicant, nor construction contractor shall be financially obligated for any monitoring activities. If evidence of any tribal cultural resources is found during ground-disturbing activities, the monitor(s) shall have the capacity to halt construction in the immediate vicinity of the find, in order to recover and/or determine the appropriate plan of recovery for the resource. The recovery process shall not unreasonably delay the construction process. The onsite monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has determined that the site has a low potential for archaeological resources.

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### TRIBAL CULTURAL RESOURCES

#### SB 18 Consultation Results

The City notified local tribes identified by NAHC about the Specific Plan on February 6, 2020, pursuant to the requirements of SB 18. The purpose of the notification letter was to invite local tribes to consult pursuant to SB 18 and to provide an opportunity for the City and interested tribes to work together in the project planning process in order to protect TTCP's that might not be known to the City or recorded at the SCCIC. The letter included a brief description of the Specific Plan and Plan Area location.

In accordance with the provisions of SB 18, the following tribes were notified:

- Gabrielino-Tongva Tribe;
- Gabrieleno Tongva Indians of California Tribal Council;
- Gabrielino/Tongva Nation;
- Torres Martinez Desert Cahuilla Indians;
- Gabrieleno/Tongva San Gabriel Band of Mission Indians;
- Soboba Band of Luiseno Indians; and
- Gabrieleno Band of Mission Indians – Kizh Nation.

To date, none of the tribes has responded to the City's notification letter. The City received a consultation request from the Gabrieleno Band of Mission Indians – Kizh Nation. A consultation was scheduled for April 29, 2020. The day of the consult, the Gabrieleno administration requested to reschedule the consult to May 1, 2020. On May 1st, they were not available, and stated they would put any concerns or information in a letter addressed to the City. To date, no letter has been received.

While there is no evidence that TCRs exist on the surface of the Plan Area, it is possible that previously unknown TCRs could exist in undisturbed soils on the site. Therefore, impacts are potentially significant.

#### 5.15.3 Cumulative Impacts

Implementation of the Specific Plan in conjunction with other planned projects in other areas of the City, in accordance with the projections of the Long Beach General Plan, could unearth unknown significant cultural resources, including TCRs and/or TTCP's. Other planned development projects in the City would involve ground disturbance and could damage TCR's and/or TTCP's that could be buried in those project sites.

However, other development projects would require the preparation of site-specific cultural resource assessments, which would include some degree of surface-level surveying. As a part of the assessments, a cultural resources records search of the CHRIS and a Sacred Land Files search would also be required. Additionally, as with the Specific Plan, other development projects would similarly be required to comply with all applicable existing regulations, procedures, and policies that are intended to address TCR and TTCP impacts, including consultation under AB 52 and SB 18 (if required), which addresses accidental discoveries of archaeological sites and resources, including TCR's and TTCP's. Furthermore, there are no cumulative development projects adjacent to the Plan Area which could contribute to a significant impact to tribal cultural resources; impacts would not be cumulatively considerable.



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#### 5.15.4 Level of Significance Before Mitigation

Without mitigation, the following impacts would be **potentially significant**:

- **Impact 5.15-1** Grading activities have the potential to encounter unknown, buried tribal cultural resources.

#### 5.15.5 Mitigation Measures

- TCR-1 Prior to the issuance of any grading permit, the City of Long Beach Development Services Department shall ensure that the construction contractor provide access for Native American monitoring during ground-disturbing activities. This provision shall be included on project plans and specifications. The site shall be made accessible to any Native American tribe requesting to be present, provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur.
- TCR-2 Should a potential TCR be encountered and no monitors are present, construction activities near the encounter shall be temporarily halted within 50 feet of the discovery and the City notified. The City will notify Native American tribes that have been identified by the Native American Heritage Commission to be traditionally and culturally affiliated with the geographic area of the Proposed Project. If the City determines that the potential resource is a TCR (as defined by PRC, Section 21074), tribes consulting under AB 52 and SB 18 would be provided a reasonable period of time, typically 5 days from the date a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities, as well as the treatment and disposition of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and shall consider the recommendations of the tribe(s). Implementation of proposed recommendations will be made based on the determination of the City that the approach is reasonable and feasible. All activities shall be conducted in accordance with applicable regulatory requirements.
- TCR-3 **Native American Monitor/Consultant.** The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both approved by the Gabrieleno Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the area of the project location. This list is provided by the NAHC. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleno Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the Plan Area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Plan Area grading and excavation

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### TRIBAL CULTURAL RESOURCES

activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.

TCR-4      **Unanticipated Discovery of Tribal Cultural and Archaeological Resources.** Upon discovery of any archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant approved by the Gabrieleno Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleno Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request reburial or preservation for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a “historical resource” or “unique archaeological resource”, time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to a local school or historical society in the area for educational purposes.

TCR-5      **Unanticipated Discovery of Human Remains and Associated Funerary Objects.** Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) and PRC 5097.98 shall be followed.

TCR-6      **Resource Assessment & Continuation of Work Protocol.** Upon discovery, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the burial. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the

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construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

TCR-7      **Kizh-Gabrieleno Procedures for burials and funerary remains.** If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the following treatment measures shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. These remains are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

TCR-8      **Treatment Measures.** Prior to the continuation of ground disturbing activities, the land owner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive diagnostics on human remains.

Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the Plan Area but at a location agreed upon between the

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Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

TCR-9      **Professional Standards.** Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.

#### 5.15.6 Level of Significance After Mitigation

Implementation of Mitigation Measures TCR-1 through TCR-9 require a Native American monitor and ensures that if TCRs are encountered resources are properly treated. With mitigation, impacts would be less than significant.

#### 5.15.7 References

Cogstone. 2020, November. Cultural and Paleontological Resources Assessment Report.

## 5. Environmental Analysis

### 5.16 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) discusses the current conditions for utility providers, including water, wastewater, stormwater, solid waste, electricity, and natural gas services, and the Century Villages at Cabrillo Specific Plan's (Specific Plan) effects on these providers and their service systems.

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Villages at Cabrillo Specific Plan (Specific Plan) to impact utilities and services systems. Utilities and services systems include wastewater (sewage) treatment and collection systems, water supply and distribution systems, storm drainage, solid waste collection and disposal, and other public utilities. Impacts to hydrology (e.g., flooding) and water quality are provided in Section 5.8, *Hydrology and Water Quality*. Storm drainage, though discussed below, is also addressed in Section 5.8, *Hydrology and Water Quality*.

The analysis in this section is based in part on the following sources:

- *Utility Infrastructure Technical Report: Wastewater*, KPFF Consulting Engineers, June 16, 2020 (Appendix G1)
- *Utility Infrastructure Technical Report: Water*, KPFF Consulting Engineers, July 10, 2020 (Appendix G3)
- *Technical Report, Water Resources*, KPFF, June 19, 2020 (Appendix G2)
- *Water Supply Assessment*, Long Beach Water, May 28, 2020 (Appendix G4)

These technical reports are provided in Appendices G1, G2, G3, and G4 of this DEIR, as indicated above.

#### 5.16.1 Wastewater Treatment and Collection

##### 5.16.1.1 ENVIRONMENTAL SETTING

##### Regulatory Background

###### *Federal*

###### ***Clean Water Act and National Pollution Elimination Discharge System***

The Clean Water Act establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters (US Code, Title 33, §§ 1251 et seq.). Under the act, the US Environment Protection Agency (EPA) is authorized to set wastewater standards and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that discharge directly into Waters of the United States. The federal Clean Water Act requires wastewater treatment of all effluent before it is discharged into surface waters. NPDES permits for such discharges in the project region are issued by the Los Angeles Regional Water Quality Control Board (RWQCB).

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#### *State*

##### ***State Water Resources Control Board: Statewide General Waste Discharge Requirements***

The General Waste Discharge Requirements specify that all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California need to develop a Sewer Master Plan (“Master Plan”). The Master Plan evaluates existing sewer collection systems and provides a framework for undertaking the construction of new and replacement facilities in order to maintain proper levels of service. The Master Plan includes inflow and infiltration studies to analyze flow monitoring and water use data, a capacity assurance plan to analyze the existing system with existing land use and unit flow factors, a condition assessment and sewer system rehabilitation plan, and a financial plan with recommended capital improvements and financial models.

##### ***General Pretreatment Regulations for Existing and New Sources of Pollution***

The General Pretreatment Regulations establish the responsibilities of Federal, State, and local government, industry, and the public to implement National Pretreatment Standards to control pollutants which pass through or interfere with treatment processes in Publicly Owned Treatment Works (POTW) or which may contaminate sewage sludge. Pretreatment standards are pollutant discharge limits which apply to industrial users.

#### *Local*

##### ***Long Beach Water Reclamation Plant NPDES Permit***

Wastewater discharge requirements for the Long Beach Reclamation Plant are detailed in NPDES No. CA0054119, Order No. R4-2003-0123. The permit includes the conditions needed to meet minimum applicable technology-based requirements. The permit includes limitations more stringent than applicable federal technology-based requirements where necessary to achieve the required water quality standards.

##### ***Los Angeles County Sanitation District’s Connection Fees***

Capital improvements to the Los Angeles County Sanitation District’s (LACSD) water reclamation plants are funded from connection fees charged to new developments, redevelopments, and expansions of existing land uses. The connection fee is a capital facilities fee used to provide additional conveyance, treatment, and disposal facilities (capital facilities) required by new users connecting to the LACSD’s sewerage system or by existing users who significantly increase the quantity or strength of their wastewater discharge. The Connection Fee Program ensures that all users pay their fair share for any necessary expansion of the system. Estimated wastewater generation factors used in determining connection fees in LACSD’s 22 member districts are set forth in the Connection Fee Ordinance for each respective district available on LACSD’s website. Most of the City of Long Beach, including the Plan Area, is in District 3 of the Sanitation District; (LACSD 2016).

##### ***Long Beach Water Department’s Rules, Regulations, and Charges***

In 2011, the Board of Water Commissioners adopted by resolution the *Rules, Regulations and Charges Governing Potable Water, Reclaimed Water, Sewer Service, and the Water Conservation and Water Supply Shortage Plan* (“Rules,

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Regulations, and Charges”), which govern potable water, reclaimed water, sewer service, and the water conservation and water supply shortage plan provided by the Long Beach Water Department (LBWD 2017a).

In accordance with Part 18 (Sewer Capacity Charge) of the Rules, Regulations, and Charges, new residential and commercial development in the City is required to pay a sewer capacity fee. Commercial (all added plumbing fixtures) and residential uses (new units only) are required to pay the fees set forth in Appendix B of the Rules, Regulations, and Charges which are currently set at \$109.05 for both of these land uses (Long Beach 2019).

### ***Long Beach Water Department Sewer System Management Plan***

The purpose of the Sewer System Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate, and maintain all parts of LBWD’s sewer system. The overall objective of LBWD SSMP’s program implementation is to prevent and minimize sanitary sewer overflows (SSO) and to mitigate SSOs that do occur. According to the State Water Resources Control Board’s (SWRCB) Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003- DWQ), the SSMP must be updated to incorporate changes every 5 years (LBWD 2019a).

### ***City of Long Beach Municipal Code***

**Chapter 15.01, Sewers**—Rules, Regulations and Charges, of the Municipal Code sets forth the current edition of the rules, regulations and charges governing water and sewer service as approved by the Board of Water Commissioners.

## Existing Conditions

### ***Wastewater Conveyance***

LBWD owns, operates, and maintains over 700 miles of sanitary sewer lines and delivers over 40 million gallons of wastewater per day to the Long Beach Water Reclamation Plant (WRP) (LBWD 2019b).

The LBWD’s sanitary sewer system comprises of:

- 712 miles of gravity mains
- 7.6 miles of force mains (2-inch to 12-inch diameter)
- 28 sewer lift stations
- 115,133 lateral connections
- 16,158 sewer maintenance manholes (LBWD 2019a)

The Plan Area’s existing sewer infrastructure was constructed in the 1960’s and consists of two private sanitary sewer main lines which tie into a public point of connection (POC) along Technology Place. Each private main line separately branches off to buildings serving the West and East portions of the campus. Based on available record data provided by the LBWD, the sewer main connected to the public POC West of River Avenue is a 10-inch vitrified clay pipe (VCP) and has a calculated capacity of 0.300 cubic feet per second (cfs) (193,895

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gallons per day (gpd)). The sewer mains connected to the public POC East of River Avenue are two 8-inch VCPs with a total calculated capacity of 0.864 cfs (558,418 gpd) (KPFF 2020b).

#### *Wastewater Treatment*

The WRP is located at 7400 East Willow Street in the City and is owned and operated by the LACSD. The plant occupies 17 acres west of Interstate 605 south of Katella Avenue, and began operation in 1973. The WRP provides primary, secondary and tertiary treatment and serves a population of approximately 250,000 people. The WRP treats about 18 million gallons of wastewater per day, though it has the capacity to treat up to 25 million gallons of wastewater per day. (LBWD 2019b, 2019c).

Almost 6 million gallons per day of the recycled water is used at over 60 sites. Reuses include landscape irrigation of schools, golf courses, parks, and greenbelts by the City, the re-pressurization of oil-bearing strata off the coast of Long Beach, and the replenishment of the Central Basin groundwater supply from water processed at the Leo J. Vander Lans Advanced Water Treatment Facility. The remainder is discharged to Coyote Creek (LBWD 2019c).

#### 5.16.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1        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.
- U-3        Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

#### 5.16.1.3 ENVIRONMENTAL IMPACTS

##### Impact Analysis

The following impact analysis addresses thresholds of significance for which the Initial Study (Appendix A) disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.16-1: Existing wastewater infrastructure and treatment facilities would be able to accommodate project-generated wastewater demands. [Threshold U-1 and U-3]**

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#### *Wastewater Conveyance*

Wastewater generation would not occur during the construction phase of the Specific Plan as a result of construction workers on-site. Construction workers would utilize portable restrooms, which would not



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contribute to wastewater flows to the City's wastewater system. Thus, wastewater generation from construction activities is not anticipated to cause any increase in wastewater flows, and no impact would occur.

Based on the type of use and generation factors, the Specific Plan would generate a net increase of approximately 0.12 cfs (79,280 gpd) of wastewater in which 0.08 cfs (53,455 gpd) is collected from the West private main line and 0.04 cfs (25,825 gpd) from the East private main line (KPPF 2019a).

The existing capacity of the 10-inch sewer main at the public POC West of River Ave is approximately 0.300 cfs at 50% full and the existing capacity of the two 8-inch sewer mains connected to the public POC's East of River Ave is approximately 0.864 cfs at 50% full; 50% full, also known as 50% depth over diameter, is the local agency requirement for sewer pipe capacity. These sewer mains serve only the Plan Area since the Plan Area is the most upstream development on this particular public system.

At full buildout of the Specific Plan, the private sewer main line in the West portion of the campus will contribute a net increase of approximately 0.08 cfs of sewage into the public sewer system West of River Avenue, which results in approximately 27% of the pipe's capacity at 50% full. Similarly, at full buildout of the Specific Plan, the private sewer main line in the East portion of the campus will contribute a net increase of approximately 0.04 cfs of sewage into the public sewer system East of River Avenue, which results in approximately 5% of the pipe's capacity at 50% full. Since sewer generation associated with implementation of the Specific Plan would be within the available sewer infrastructure capacity, it would not require the construction of new or expanded sewer lines, and impacts on wastewater infrastructure would be less than significant.

### *Wastewater Treatment*

The Specific Plan would generate a net increase of 79,280 gpd of sewer that needs to be treated at the WRP, which has a residual capacity of 7 million gpd. Therefore, the Specific Plan will contribute an increased sewage flow equivalent to approximately 1% of WRP's residual capacity; impacts would be less than significant.

The WRP is required by federal and state law to meet applicable standards of treatment plant discharge requirements subject to NPDES NO. CA0054119, Order No. R4-2003-0123. The permit includes the conditions needed to meet minimum applicable technology-based requirements. The NPDES permit regulates the amount and type of pollutants that the system can discharge into receiving waters. The WRP is operating in compliance with and would continue to operate subject to state waste discharge requirements and federal NPDES permit requirements, as set forth in the NPDES permit and order. Furthermore, the Specific Plan will comply with the LBWD's Rules, Regulations, and Charges.

The additional wastewater (quantity and type) that would be generated by the Specific Plan and treated by the WRP would not impede the treatment plant's ability to continue to meet its wastewater treatment requirements. Impacts on wastewater treatment would be less than significant.

***Level of Significance Before Mitigation:*** Less than Significant.

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#### 5.16.1.4 CUMULATIVE IMPACTS

The area considered for cumulative impacts to wastewater treatment is the WRP's service area. The area considered for cumulative impacts to wastewater conveyance systems is the LBWD's service area.

Future growth in the City would result in increases in wastewater flow. These include increases in residential, commercial, and industrial effluent. The City's SSMP projects daily wastewater generation in line with land use changes associated with the General Plan. Sewer collection system expansions and upgrades would be based on the SSMP. Through the use of connection fees and agreements, LBWD is able to maintain and expand its wastewater collection system as necessary and is able to ensure that new developments pay their fair-share costs associated with increased demand. Therefore, there would be no significant cumulative impacts on wastewater collection.

The City's wastewater effluent is directed to WRP operated by LACSD. Future development in the City would comply with the LBWD's Rules, Regulations, and Charges to ensure that the WRP continues to operate in compliance with its NPDES permit. Furthermore, future development would also comply with the requirements of the LACSD's Connection Fee Program to fund future capital improvement programs. Accordingly, cumulative impacts on wastewater infrastructure and treatment would be less than significant.

#### 5.16.1.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval impact 5.16-1 would be less than significant.

#### 5.16.1.6 MITIGATION MEASURES

No mitigation measures required.

#### 5.16.1.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval impact 5.16-1 would be less than significant.

### 5.16.2 Water Supply and Distribution Systems

#### 5.16.2.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### *Federal*

##### ***Federal Safe Drinking Water Act***

The Safe Drinking Water Act (SDWA), the principal federal law intended to ensure safe drinking water for the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the EPA to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally-occurring and man-made contaminants. These standards set enforceable

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maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the SWRCB conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

### *State*

#### ***Porter-Cologne Water Quality Control Act***

Under the Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.), which was passed in California in 1969 and amended in 2013, the SWRCB has authority over State water rights and water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions, including regulating all pollutant or nuisance discharges that may affect either surface water or groundwater.

#### ***California Senate Bill 610 and 221***

Senate Bill (SB) 610 and SB 221 were passed in 2001 to establish coordination between the local water and land use decisions and ensure that California cities and communities are provided with adequate water supply. Specific projects are required to prepare a Water Supply Assessment (WSA). The WSA is composed of information regarding existing and forecasted water demands, as well as information pertaining to available water supplies for the new development.

The following projects are required to prepare a WSA:

- Residential developments consisting of more than 500 homes, or
- A business employing more than 1,000 people or having more than 500,000 square feet;
- A commercial office building employing more than 1,000 people or having more than 250,000 square feet of floor space;
- A hotel having more than 500 rooms;
- An industrial complex with more than 1,000 employees and occupying more than 40 acres of land; or
- A mixed-use project that requires the same or greater amount of water as a 500 dwelling-unit project.

Based on the Specific Plan's characteristics, a WSA is required.

SB 221 requires written verification that there is sufficient water supply available for new residential subdivisions that include over 500 dwelling units or meet the other requirements listed above. The verification must be provided before commencement of construction for the project.

#### ***Urban Water Management Planning Act***

The Urban Water Management Planning Act of 1983 (Water Code Sections 10610 et seq.) requires water suppliers to:

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- Plan for water supply and assess reliability of each source of water over a 20-year period in 5-year increments.
- Identify and quantify adequate water supplies, including recycled water, for existing and future demands in normal, single-dry, and multiple-dry years.
- Implement conservation and the efficient use of urban water supplies.

Significant new requirements for quantified demand reductions have been added by the Water Conservation Act of 2009 (Senate Bill 7 of Special Extended Session 7 or SBX7-7), which amended the Urban Water Management Planning Act and adds new water conservation provisions to the Water Code.

#### ***Mandatory Water Conservation***

Following Governor Brown's declaration of a state of emergency on July 15, 2014, the SWRCB adopted Resolution No. 2014-0038. The emergency regulation was partially repealed by Resolution No. 2017-0024. The remaining regulation prohibits several activities, including (1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; (2) the use of a hose to wash a motor vehicle except where the hose is equipped with a shut-off nozzle; (3) the application of potable water to driveways and sidewalks; (4) the use of potable water in nonrecirculating ornamental fountains; and (5) the application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall. The SWRCB resolution also directed urban water suppliers to submit monthly water monitoring reports to the SWRCB.

#### ***The Water Conservation Act of 2009 (Senate Bill X7-7)***

The Water Conservation Act of 2009, SB X7-7, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water use by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans. The SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards, it also requires that agricultural water suppliers prepare plans and implement efficient water management practices.

#### ***Water Conservation in Landscaping Act of 2006 (AB 1881)***

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires the Department of Water Resources (DWR) to update the State Model Water Efficient Landscape Ordinance (MWELO) by 2009. The State's model ordinance was issued on October 8, 2009. Under AB 1881, cities and counties are required to adopt a State updated model landscape water conservation ordinance by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance. It also requires reporting on the implementation and enforcement of local ordinances, with required reports due by December 31, 2015 (DWR 2019).

#### ***2015 Update of the State Model Water Efficient Landscape Ordinance (Per Governor's Executive Order B-29-15)***

To improve water savings in the landscaping sector, the DWR updated the Model Ordinance in accordance with Executive Order B-29-15. The Model Ordinance promotes efficient landscapes in new developments and

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retrofitted landscapes. The Executive Order calls for revising the Model Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf.

New development projects that include landscaped areas of 500 square feet or more, including residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review, are subject to the Model Ordinance. The previous landscape size threshold for new development projects ranged from 2,500 square feet to 5,000 square feet.

Chapter 13.02 of the MMWD Code adopts an ordinance that incorporates updates consistent with the 2015 State MWELO update.

#### *Local*

##### ***City of Long Beach Urban Water Management Plan***

Long Beach is required to prepare an Urban Water Management Plan (UWMP) pursuant to Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act, effective January 1, 1984. The Urban Water Management Planning Act requires all urban water suppliers to prepare, adopt, and file a UWMP with the DWR every five years. The Long Beach 2015 UWMP outlines current water demands, sources, and supply reliability to the City by forecasting water use based on climate, demographics, and land use changes in the City. The plan also provides demand management measures to increase water use efficiency for various land use types, and details a water supply contingency plan in case of shortage emergencies (LBWD 2016).

##### ***City of Long Beach Municipal Code***

The following provisions from the LBMC focus on water supply impacts and water conservation:

- **Chapter 2.38 (Sustainable City Commission).** This chapter establishes the Sustainable City Commission, which provides advisory policy recommendations to the City Council on issues relating to the environment including recommendations on a sustainable City plan, efforts or programs to address environmental issues such as air quality, water quality, and resource conservation relating to the protection and integrity of the natural environment, and programs to increase education and awareness of the environment. The Sustainable City Commission also serves as a forum for community discussion of these environmental issues and to encourage input and participation from all sectors.
- **Chapter 18.48 (Fire Code).** This chapter sets forth the requirements in the Fire Code. Section 18.48.770 establishes fire water flow standards consistent with the California Fire Code.
- **Chapter 18.47 (Green Building Standards Code).** Adopts by reference the most current (2019) California Green Building Standards Code (CALGreen).
- **Chapter 21.42 (Landscaping Standards), Section 21.42.035 (Special Requirements for Water Efficient Landscaping).** Outlines the types of projects that are required to adhere to the provisions of this section.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

#### Existing Conditions

##### *Water Supply*

LBWD provides water service to residents, businesses, and other users in the City, including the Plan Area. As of 2017, the LBWD's service area encompassed approximately 50 square miles and a population of 480,173, with some customers outside the City limits (LBWD 2017b). The primary source of water is groundwater extracted locally from the Central Basin. Other water supplies include purchased imported water from the Metropolitan Water District (MWD) and recycled water from the Long Beach WRP.

Every urban water supplier is required to assess the reliability to provide water service to its customers under normal, dry, and multiple dry water years. The 2015 UWMP states that the City will be able to meet projected supplies between 2020 and 2040 during normal years, single dry years, and multiple dry years (see Table 5.16-1).

**Table 5.16-1 Normal, Single Dry, and Multiple Dry Year Supply and Demand (AFY)**

	2020	2025	2030	2035	2040
<b>Normal Year</b>					
Supply Totals	77,291	77,791	78,291	78,791	79,291
Demand Totals	63,643	63,410	63,454	63,609	64,137
<b>Surplus</b>	13,648	14,381	14,836	15,182	15,154
<b>Single Dry Year</b>					
Supply Totals	77,291	77,791	78,291	78,791	79,291
Demand Totals	63,643	63,410	63,454	63,609	64,137
<b>Surplus</b>	13,648	14,381	14,836	15,182	15,154
<b>Multiple Dry Year</b>					
Supply Totals	77,291	77,791	78,291	78,791	79,291
Demand Totals	63,643	63,410	63,454	63,609	64,137
<b>Surplus</b>	13,648	14,381	14,836	15,182	15,154

Note: Includes both potable and recycled water supplies/demands.  
Source: Long Beach Water Department, 2016. 2015 UWMP

##### *Water Conveyance*

As of 2015, there were approximately 90,000 active potable water customer accounts throughout the City. LBWD also provides irrigation services that supply water solely for the purposes of landscape irrigation. In 2015 LBWD had just over 1,200 active irrigation services. Recycled water connections for the same year amounted to 129 connections.

The City currently owns and operates:

- 29 active groundwater wells
- 907 miles of water mains

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

- Three wells (Wells 41, 44, and 52) currently undergo treatment at the John Gavin Ion Exchange Plant (LBWD 2016).

The existing on-site water system is owned by the LBWD and consists of 6- to 8-inch main lines located in the private streets. There are existing easements within the private streets for the water system. In compliance with existing standard development requirements and the LBWD, Century Villages at Cabrillo pays the required fees to connect to the water distribution system.

### *Water Treatment*

LBWD pumps groundwater through 29 active wells throughout the service area and then transports the extracted groundwater water through a series of collection lines to its groundwater treatment plant. The treatment plant is also home to LBWD's water quality laboratories, which conduct over 50,000 water quality tests per year on LBWD's water supply (LBWD 2016).

#### 5.16.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1      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.
- U-2      Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

#### 5.16.2.3 ENVIRONMENTAL IMPACTS

### **Impact Analysis**

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) identified potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

<b>Impact 5.16-2:</b>	<b>Available water supplies are sufficient to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years; existing water infrastructure and treatment facilities would be able to accommodate project-generated water demands. [Thresholds U-1 and U-2]</b>
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### **Water Supply**

#### *Construction*

Construction activities would result in a temporary increase in water demand. Water use would be associated with earthwork and soil compaction, dust control, mixing and placement of concrete, equipment and site

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

cleanup, irrigation for plant and landscaping establishment, water line testing and flushing, and other related short-term activities. The amount of water used during construction would vary depending on weather, soil conditions, the size of the area under construction, and the specific activities being performed. These activities would occur intermittently throughout the construction period and would be temporary in nature. However, the short-term and intermittent water use during construction is not expected to be substantial. Water demand generated by construction activities would be offset by the reduction in water consumption resulting from the removal of the existing buildings to be carried out during different phases. Additionally, as concluded in LBWD's 2015 UWMP, projected water demand for the City will be met by available supplies during a normal year, single dry year, and multiple dry year hydrological conditions through 2040, as well as the intervening years. Therefore, the Specific Plan's construction impacts on water supply would be less than significant.

#### *Operation*

Development of the Specific Plan would increase the long-term water demand associated with consumption, operational uses, maintenance, and other on-site activities. On May 28, 2020, the Long Beach Board of Water Commissioners approved the WSA for the Specific Plan, pursuant to California Water Code Sections 10910 through 10914 (see Appendix G.4 of this DEIR). The WSA estimated that the Specific Plan will result in an additional water demand of 192.3 acre-feet per year (AFY). The Board determined that there would be adequate water supplies available during normal, single-, and multiple-dry water years to meet the projected water demand of the Specific Plan, in addition to the existing and other planned future uses of LBWD's system. The finding is based on LBWD's reliable supply of groundwater and imported water, the expanded use of recycled water, continued success with water conservation programs, and the growth accounted for within the LBWD 2015 Urban Water Management Plan.

The WSA is an extremely conservative estimate of water demand based on a variety of factors. First, the WSA is based on the conservative estimate that each new dwelling unit will use an amount of water equal to that of a typical Long Beach single family home (500 single family homes used 130 AFY) and it overestimates the net increase in dwelling units by 20 units. In calendar year 2015, 500 multi-family (apartments and condominiums) dwelling units in Long Beach averaged 78 AFY, or 60 percent of water use for single family homes. Second, nonresidential water demand was based on commercial water demand factors from the "Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001". The guidebook sets 500 dwelling units as being equivalent to 250,000 sf of commercial use in terms of water demand. Therefore, 250,000 sf of commercial use has a water demand of 130 AFY. Third, the water demand does not account for water conservation features that would be implemented as part of the Specific Plan and required by the City, including LBMC Chapter 21.42, Landscaping Standards. The Specific Plan development will include all State mandated water-saving features, including water-efficient faucets, shower heads, and toilets; landscape improvements would include drought tolerant landscaping and incorporate California native species.

To estimate actual water demand, KPFF estimated water demand based on demand factors specific to the product type proposed in the Specific Plan (see Appendix G.3, of this DEIR). Water demand for residential was based on an average demand for studios and 1-, 2-, and 3-bedroom apartments; and factors for residential and commercial were based on 2019 rates.



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### UTILITIES AND SERVICE SYSTEM

As shown in Table 5.16-2, it is estimated that the Specific Plan would result in a net increase in daily domestic water demand of approximately 93.4 AFY, or approximately 49 percent of that assumed in the WSA.

**Table 5.16-2 Water Demand Estimate for the Specific Plan**

Land Use	Removed	Proposed	Net Increase	Domestic Water Demand Rate	Net Increase in Water (AFY)
Residential Units	235 DU	750 DU	515 DU	0.15 AFY/ DU <sup>a</sup>	77.3
Amenities	10,030 SF	77,000 SF	66,970 SF	0.1344 AFY/TSF <sup>b</sup>	9.0
Education	10,200 SF	15,000 SF	4,800 SF	0.1344 AFY/TSF <sup>b</sup>	0.6
Commercial/Retail	0 SF	17,000 SF	17,000 SF	0.0560 AFY/TSF <sup>b</sup>	1.0
Admin/Services	7,250 SF	48,000 SF	40,750 SF	0.1344 AFY/TSF <sup>b</sup>	5.5
<b>Total Net Increase</b>	-			-	<b>93.4</b>

Source: KPFF, 2020c (see Table 3 of Appendix G.3 of this DEIR).

<sup>a</sup> Demand Factors for residential units are based on the average of studio and apartments (1-bedroom, 2-bedroom, 3-bedroom) per LA County Sewer Capacity Availability Requests (SCAR) (latest version as of 2019).

<sup>b</sup> Demand Factors for commercial land use are based on the average of studio and apartments (1-bedroom, 2-bedroom, 3-bedroom) per LA County Sewer Capacity Availability Requests (SCAR) (latest version as of 2019).

AFY = Acre-feet per year

SF = Square feet

TSF = Thousand square feet

DU = Dwelling unit

Based on LBWD's 2015 UWMP water demand projections through 2040, the water demand for the City in 2040 during normal year, single dry year, and multiple dry year hydrological conditions is expected to reach approximately 64,137 AFY with an available supply of 79,291 AFY (LBWD 2016). The Specific Plan's estimated net increase in water demand of approximately 93.4 AFY is well within the City's residual water supply. Therefore, LBWD would be able to meet the water demand for the Specific Plan in combination with existing and planned water demand in its future service area.

## Water Infrastructure

### Construction

The Specific Plan would require construction of new, on-site water distribution lines to serve the new buildings. Construction impacts associated with the installation of water distribution lines would primarily involve trenching in order to place the water distribution lines below the surface and would be limited to on-site water distribution, with minor off-site work associated with connections to the public main. Prior to ground disturbance, project contractors would coordinate with LBWD to identify the locations and depth of all lines. LBWD would be notified in advance of proposed ground disturbance activities to avoid water lines and disruption of water service. Therefore, impacts on water infrastructure associated with construction activities would be less than significant.

### Operation

Water service to the Plan Area would continue to be provided by the LBWD for domestic and fire protection uses. While domestic water demand is typically the main contributor to water consumption, fire flow demands

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

have a much greater instantaneous impact on infrastructure and therefore are the primary means for analyzing infrastructure capacity. Per the current California Fire Code, fire flow requirements are based on building types and floor area, and range from 1,500 to 8,000 gallons per minute at 20 pounds per square inch. In accordance with LBMC Section 18.48.420, all new commercial, industrial, and non-residential buildings that require two or more exits or that are greater than 3,000 square feet shall be protected by an automatic sprinkler system. Per the LBMC, fire flows can be reduced by up to 50 percent when fire sprinklers are installed. Prior to the issuance of building permits, the Long Beach Fire Department (LBFD) would be required to grant approval of the final building design, including all fire prevention and suppression systems, which would ensure the Specific Plan is developed pursuant to Fire Code requirements. In addition, on-site water connections would be constructed, as necessary, to comply with the fire flow set for the Specific Plan by the LBFD during the plan check process. The Specific Plan would also implement the requirements of the Green Building Standards Code and the City's Landscaping Standards.

With implementation of on-site water system improvements, the Specific Plan would not exceed the available capacity within the distribution infrastructure that would serve the Plan Area. Therefore, impacts with regard to water infrastructure would be less than significant.

***Level of Significance Before Mitigation:*** Less than Significant.

#### 5.16.2.4 CUMULATIVE IMPACTS

##### *Water Supply*

The geographic context for the cumulative impact analysis on water supply is the LBWD service area (i.e., the City). The LBWD is required to prepare and updated UWMP every five years to plan and provide for water supplies to serve existing and projected demands over a 20-year horizon. The 2015 UWMP prepared by LBWD accounts for existing development within the City, as well as projected growth through the year 2040. The UWMP water demand projections assumes population, housing, and employment growth anticipated in the City based on both historical trends and official forecasts from SCAG and the California Department of Finance (LBWD 2016).

The LBWD's 2015 UWMP acknowledges that growth in the City is expected to continue to be lower than that of other cities in Southern California and the region as a whole. In addition, the LBWD has determined it will be able to reliably provide water to its customers from 2015 through the year 2040, as well as during intervening years.

Additionally, under the provisions of SB 610, the LBWD is required to prepare a comprehensive water supply assessment for every new development "project" (as defined by Section 10912 of the Water Code) within its service area that meets certain thresholds. As described in the Regulatory Framework subsection above, the types of projects that are subject to the requirements of SB 610 tend to be larger projects that may or may not have been included within the growth projections of the LBWD 2015 UWMP. The water supply assessment for such projects would evaluate the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and measures to secure alternative sources if needed.

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Compliance with regulatory requirements that promote water conservation, such as the LBWD Water Conservation and Water Supply Shortage Plan and the Sustainable City Plan, as well as implementation of water saving strategies, will also assist in assuring that adequate water supply is available on a cumulative basis. Therefore, it is anticipated that the LBWD would be able to supply the demands of the Specific Plan and future growth through 2040 and beyond; cumulative impacts on the water supply would be less than significant.

### *Water Infrastructure*

The geographic context for the cumulative impact analysis for water infrastructure is the project vicinity. Development of the Specific Plan and future new development in the project vicinity would cumulatively increase demands on the existing water conveyance system. However, new development projects would be subject to City review to assure that the existing public utility facilities would be adequate to meet the domestic and fire water demands of each project. Furthermore, individual projects would be subject to City requirements regarding infrastructure improvements needed to meet respective water demands, fire flow and pressure requirements. LBWD, Long Beach Department of Public Works, and the LBFD would conduct ongoing evaluations to ensure facilities are adequate. Therefore, cumulative impacts on the water infrastructure system would be less than significant.

#### **5.16.2.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION**

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.16-2.

#### **5.16.2.6 MITIGATION MEASURES**

No mitigation measures required.

#### **5.16.2.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Upon implementation of regulatory requirements and standard conditions of approval, impact 5.16-2 would be less than significant.

### **5.16.3 Storm Drainage Systems**

#### **5.16.3.1 ENVIRONMENTAL SETTING**

##### **Regulatory Background**

##### *Federal*

##### ***National Pollutant Discharge Elimination System Program***

Under the NPDES program, all facilities that discharge pollutants into waters of the United States are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

#### *State*

##### ***State Water Resources Control Board General Construction Permit***

The SWRCB has adopted a statewide Construction General Permit (Order No. 2012-0006-DWQ) for stormwater discharges associated with construction activity. These regulations prohibit the discharge of stormwater from construction projects that include one acre or more of soil disturbance. Construction activities subject to this permit include clearing, grading, and other disturbance to the ground, such as stockpiling or excavation, that results in soil disturbance of at least one acre of total land area. Individual developers are required to submit a Notice of Intent to the SWRCB for coverage under the NPDES permit and would be obligated to comply with its requirements.

The NPDES Construction General Permit requires all dischargers to (1) develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies best management practices (BMP) to be used during construction of the project, (2) eliminate or reduce nonstorm water discharge to stormwater conveyance systems, and (3) develop and implement a monitoring program of all BMPs specified. The two major objectives of the SWPPP are to (1) help identify the sources of sediment and other pollutants that affect the water quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as nonstorm water discharges.

##### ***Los Angeles RWQCB (MS4) Permit for the City of Long Beach***

On March 11, 2014, the Los Angeles RWQCB adopted a Municipal Separate Stormwater Sewer System (MS4) Permit for discharges from the City of Long Beach MS4. The MS4 permit (Order No. R4-2014-0024, NPDES No. CAS004003) was subsequently amended by Order No. R4-2014-0024-A01 on November 23, 2016. The municipal discharges of storm water and non-storm water by the City are subject to waste discharge requirements as set forth by this MS4 permit.

##### ***Los Angeles County Standard Urban Storm Water Mitigation Plan***

Pursuant to NPDES permit requirements, the County of Los Angeles was required to submit Standard Urban Storm Water Mitigation Plans (SUSMPs). The SUSMPs are plans that designate BMPs that must be used in specified categories of development projects. Los Angeles County submitted SUSMPs, but the Los Angeles RWQCB approved the SUSMPs only after making revisions. The Executive Officer issued the revised SUSMPs on March 8, 2000. On October 5, 2000 the Los Angeles RWQCB made more changes. The change sheet at the end of the State Board Order approved SUSMPs changes the March 8, 2000 version of SUSMPs (LARWQCB 2018).

#### *Local*

##### ***City of Long Beach Low Impact Development Best Management Practices Design Manual***

In order to comply with the updated MS4 Permit, a “Low Impact Development (LID) Best Management Practices (BMP) Design Manual” was developed in advance of the final permit. This manual details actions for compliance with the LID regulations adopted in City Ordinance No. ORD-10-035, including land development policies pertaining to LID and hydromodification for new development and significant redevelopment projects.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEM

The term “hydromodification” refers to the changes in runoff characteristics from a watershed caused by changes in land use condition. More specifically, hydromodification refers to “the change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow, and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.” The use of LID BMPs in project planning and design is to preserve a site’s predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. LID BMPs try to offset these losses by introducing structural and non-structural design components that restore these water quality functions into the project’s land plan (Long Beach 2013).

#### *City of Long Beach Municipal Code*

**Chapter 8.96 – Stormwater and Runoff Pollution Control:** The purpose of this Chapter is to protect and improve water quality of receiving waters by:

- Prohibiting illicit discharges to the municipal stormwater system
- Eliminating illicit connections to the municipal stormwater system
- Eliminating spillage, dumping, and disposal of pollutant materials into the municipal stormwater system
- Reducing pollutant loads in stormwater and urban runoff from land uses and activities identified in the Municipal NPDES Permit.

The intent of this Chapter is to enhance and protect the water quality of the receiving waters of the United States in a manner that is consistent with the Clean Water Act and acts supplementary to applicable regulations and the Municipal NPDES Permit.

**Chapter 18.61 - NPDES and SUSMP Regulations:** The purpose of this chapter is to provide regulations and give legal effect to certain requirements of the NPDES permit issued to the City, and the subsequent requirements of the SUSMP, mandated by Los Angeles RWQCB. The intent of these regulations is to effectively prohibit non-storm water discharges into the storm drain systems or receiving waters and to require source control BMP to prevent or reduce the discharge of pollutants into the storm water to the maximum extent practicable.

**Chapter 18.74 – Low Impact Development Standards:** The purpose of this chapter is to require the use of LID standards in the planning and construction of development projects. The provisions of this section apply to all new development and redevelopment projects in the City. However, the following development or redevelopment projects are exempt from the requirements of this chapter:

- Any development or redevelopment projects that creates, adds or replaces less than five hundred (500) square feet of impervious surface area
- Any development or redevelopment projects involving emergency construction activities required to immediately protect public health and safety

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### UTILITIES AND SERVICE SYSTEMS

- Any development or redevelopment projects involving the grinding/overlaying and replacement of existing parking lots
- Any development or redevelopment projects where land disturbing activities result in the replacement of fifty percent (50%) or less of an existing building, structure or impervious surface area
- Any development or redevelopment projects that are technically infeasible pursuant to Subsection 18.74.040.B
- Any development or redevelopment projects that do not require a building permit.

The chapter also specifies LID requirements for new development or redevelopment projects for residential development of 5 units or more and nonresidential development. If redevelopment alters more than fifty percent (50%) of existing buildings, structures or impervious surfaces of an existing developed site, the entire site shall comply with the standards and requirements of this chapter and of the LID BMP Manual.

#### ***City of Long Beach LID Ordinance***

The City's LID Ordinance requires applicable development or redevelopment to submit a LID Plan to the City for approval prior to the City issuing any building or grading permits. Since the Specific Plan includes multiple phases, individual development projects that would be accommodated by the Specific Plan will be subject to the requirements of the City's LID Ordinance, requiring the development of a project-specific LID Plan. Project-specific LID Plans within the Plan Area will be required to ensure all of the requirements of the City's LID Ordinance on stormwater quality are addressed for that project. This includes meeting any new requirements associated with development projects, as well as the requirements of the MS4 permit (or subsequent MS4 Permits), which includes LID features and/or hydromodification controls.

#### **Existing Conditions**

The Plan Area is located within the Los Angeles River Watershed in the Los Angeles Basin. Most portions of the Los Angeles River are completely channelized for flood protection as are many of its tributaries including Compton Creek, Rio Hondo, Arroyo Seco and Tujunga Wash. They are fed by a complex underground network of storm drains and a surface network of tributaries. The average dry weather flow at the watershed's most downstream monitoring station near Long Beach is 153 cubic feet per second. The average wet weather flow is two to three times higher or more during large storms.

The drainage pattern for the Plan Area runs from north to south. Runoff is directed to three main discharge locations. The main outlet for these storm drainpipes occurs at River Avenue, where a 35 by 24-inch arch pipe connects to a 42-inch mainline. The mainline conveys stormwater to a 54-inch mainline in Pacific Coast Highway. A small amount of runoff drains to an existing earthen channel on the west side of the campus, next to State Route 103. The storm drain system within the site is private and is maintained by Century Villages at Cabrillo.

The existing development on the Plan Area generates a flow rate of 59.78 cfs and a volume of 8.37 acre-feet (ac-ft) from a 10-year storm event.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEM

Throughout the site, stormwater quality is addressed using methods and requirements as outlined in the Los Angeles County SUSMP and the City's LID design manuals. For example, catch basin, grate filter inserts, detention basins, vegetated swale, tree planting, and hydrodynamic separator units<sup>1</sup> are used throughout the site.

#### 5.16.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1        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.

#### 5.16.3.3 ENVIRONMENTAL IMPACTS

##### Impact Analysis

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) identified potentially significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.16-3: Existing storm drain facilities would be able to accommodate project-generated storm water flows. [Threshold U-1]**

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**Impact Analysis:** Refer to Section 5.8, *Hydrology and Water Quality*, of this DEIR for an analysis of the storm drain system, which is summarized below.

Storm drainage collection on the Plan Area is regulated by the City. The City has adopted the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual as its basis of design for storm drainage facilities. The LACDPW Hydrology Manual requires public and private storm drain infrastructure to be designed to the 10-year storm interval.

The existing conditions and proposed land uses do not change drastically, as the site would remain a low-income, senior, and veteran housing complex. A hydrologic analysis performed per the LACDPW Hydrology Manual estimated total runoff flow rate generated from the proposed site from a 10-year storm to be less than that of the existing site. However, the total runoff volume would increase due to the drainage subareas used for the hydrology analysis. For the existing conditions, the Plan Area was subdivided into 54 drainage subareas whereas for the proposed conditions 40 subareas were used. The larger subareas have similar or larger impervious percentages which increases the total volume from that subarea. However, with larger subareas the time of concentration decrease as well as the flow rate. Table 5.16-3 shows the difference in existing and proposed condition flow rates and volumes.

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<sup>1</sup> Hydrodynamic separators separate and trap debris, sediment, and hydrocarbons from stormwater runoff.

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### UTILITIES AND SERVICE SYSTEMS

**Table 5.16-3 Comparison of Existing and Proposed Flow Rates and Volumes from a 10-year Storm Event**

Category	Existing	Proposed	Difference
Flow Rate	59.78 (cfs)	59.31 (cfs)	-0.48 (cfs)
Volume	8.37 (ac-ft)	8.44 (ac-ft)	0.06 (ac-ft)

Source: KPFF, 2020a.  
Notes:  
cfs – cubic feet per second  
ac-ft – acre per feet

The existing storm drain system is described in Section 5.8.1.2 of this DEIR. The development accommodated by the Specific Plan would connect to the existing storm drain systems and would have similar discharge points. Currently, the 35-inch by 24-inch arch pipe is undersized to convey stormwater runoff from a 10-year storm via gravity flow out of the Plan Area. To meet the LACDPW Hydrology Manual's storage requirements, detention basins were constructed on site to store the excess volume of runoff created by existing development. This excess volume is released from the basins over a period of time at a slower flow rate due to the larger size of the watershed at buildout. Since the proposed runoff volume is only 0.06 ac-ft, a .07% increase, higher than the existing volume, the increase in hydrologic volume is considered negligible. Each phase of development is required to comply with City and County hydrology manual storage requirements, which will be plan checked by City staff. Therefore, impacts would be less than significant.

**Level of Significance before Mitigation:** Less than Significant.

#### 5.16.3.4 CUMULATIVE IMPACTS

Cumulative projects in the Los Angeles River Watershed could increase impervious areas and thus increase local runoff rates at those project sites. However, other projects in the region would be required to capture and infiltrate runoff, and many other projects in the region would be required to limit post-development runoff discharges to no greater than pre-development runoff rates, in accordance with the NPDES MS4 permit. Thus, no significant cumulative drainage impact would occur, and project drainage impacts would not be cumulatively considerable; impacts would be less than significant.

#### 5.16.3.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.16-3 would be less than significant.

#### 5.16.3.6 MITIGATION MEASURES

No mitigation measures are required.

#### 5.16.3.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Without mitigation, Impact 5.16-3 would be less than significant.



## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

### 5.16.4 Solid Waste

#### 5.16.4.1 ENVIRONMENTAL SETTING

##### Regulatory Background

###### *Federal*

###### ***Resource Conservation and Recovery Act of 1976***

The Resource Conservation and Recovery Act of 1976 (Title 40, Part 258 of the Code of Federal Regulations), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

###### *State*

###### ***California Green Building Standards Code***

Section 5.408 (Construction Waste Reduction, Disposal, and Recycling) of the California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11) requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. CALGreen is updated on a three-year cycle; the 2019 CALGreen took effect on January 1, 2020.

###### ***Assembly Bill 341***

Assembly Bill (AB) 341 increased the statewide solid waste diversion goal to 75 percent by 2020. The law, passed in 2011, mandates recycling for businesses producing four or more cubic yards of solid waste per week. This commercial recycling law took effect July 1, 2012.

###### ***Assembly Bill 939***

AB 939 (California Integrated Solid Waste Management Act of 1989; Public Resources Code 40050 et seq.) established an integrated waste-management system that focused on source reduction, recycling, composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. Compliance with AB 939 is measured in part by comparing solid waste disposal rates for a jurisdiction with target disposal rates; actual rates at or below target rates are consistent with AB 939. AB 939 also requires California counties to show 15 years of disposal capacity for all jurisdictions in the county or show a plan to transform or divert its waste.

###### *Local*

###### ***County of Los Angeles Countywide Integrated Waste Management Plan***

The Integrated Waste Management Plan is comprised of the solid waste reduction planning documents produced by the County and its cities, and a Countywide Siting Element. To assess compliance with AB 939, a Disposal Reporting System was established to measure the amount of disposal from each jurisdiction.

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Comparing current disposal rates to base year solid waste generation determines whether each jurisdiction complies with the diversion mandate. Additionally, the Siting Element is a long-term planning document that describes how the County and the cities within the County plan to manage the disposal of their solid waste for a 15-year planning period. In addition, the Siting Element contains goals and policies on a variety of solid waste management issues.

#### *City of Long Beach Municipal Code*

LBMC Chapter 18.67 (Construction and Demolition Recycling Program) requires that certain categories of projects divert at least 65 percent of construction and demolition waste from landfills, through reuse or recycling. Covered projects include all newly constructed buildings or structures, residential building or structure additions or alterations where the project increases the building or structure's conditioned area, volume or size, nonresidential building or structure additions and alterations whenever a permit is required for work, and all demolition projects.

### Existing Conditions

#### *Solid Waste Collection*

The City of Long Beach Environmental Services Bureau collects solid waste in Long Beach. Gray carts are used for household trash and yard waste, and purple carts are used for recyclable materials. The City contracts with Waste Management, Inc. for the collection of recyclables. Currently, the City's Refuse Collection Division provides service to approximately 120,000 residential and commercial customers (Long Beach 2020).

#### *Solid Waste Recycling and Disposal*

In 2018 approximately 94 percent of the solid waste from the City was disposed of at seven landfills (CalRecycle 2019a). These facilities are described in Table 5.16-4, *Landfills Serving Long Beach*. The Southeast Resource Recovery Facility recycles about 178,500 tons of solid waste per year from the City.

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Table 5.16-4 Landfills Serving Long Beach

Landfill	Remaining Capacity (million cubic yards)	Maximum Permitted Capacity (tons per day)	Maximum Permitted Throughput (tons per day)	Average Daily Disposal (2018) <sup>1</sup> (tons)	Estimated Closing Date
<b>Azusa Land Reclamation Co. Landfill</b> 1211 West Gladstone Street Azusa, CA 91702	51.5	80.6	8,000	1,194	1/1/2045
<b>El Sobrante Landfill</b> 10910 Dawson Canyon Road Corona, CA 91719	144.0	209.9	16,054	11,288	1/1/2051
<b>Frank R. Bowerman Sanitary Landfill</b> 11002 Bee Canyon Access Road Irvine, CA 92618	205.0	266.0	11,500	7,898	12/31/2053
<b>Olinda Alpha Landfill</b> 1942 N. Valencia Avenue Brea, CA 92823	34.2	148.8	8,000	7,133	12/31/2021
<b>Prima Deshecha Landfill</b> 32250 Avenida La Pata San Juan Capistrano, CA 92675	134.3	172.1	4,000	1,817	12/31/2102
<b>Simi Valley Landfill &amp; Recycling Center</b> 2801 Madera Road Simi Valley, CA 93065	88.3	119.6	9,250	4,251	1/30/2052
<b>Sunshine Canyon City/County Landfill</b> 14747 San Fernando Road, Los Angeles County, CA 91342	77.9	140.9	12,100	7,036	10/31/2037
<b>Total</b>	<b>735.2</b>	<b>1,137.9</b>	<b>68,904</b>	<b>40,617</b>	<b>-</b>

Sources: CalRecycle 2019b, 2019c, 2019d, 2019e, 2019f, 2019g, 2019h, 2019i.

<sup>1</sup> Average daily disposal is estimated based on 300 operating days per year. Each facility is open six days per week, Monday through Saturday, except certain holidays.

Collectively the seven landfills have a remaining disposal capacity of approximately 735.2 million cubic yards. All the landfills, except the Olinda Alpha landfill, have a disposal capacity beyond the 15-year horizon, as required by AB 939.

Compliance with AB 939 is measured in part by actual disposal rates compared to target rates for residents and employees, respectively; actual disposal rates at or below target rates are consistent with AB 939. Target disposal rates for Long Beach are 7.6 pounds per day (ppd) per resident and 25.1 ppd per employee. Actual disposal rates in 2018 were 4.5 ppd per resident and 12.4 ppd per employee (CalRecycle 2019j). Thus, solid waste diversion in Long Beach is consistent with AB 939.

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### UTILITIES AND SERVICE SYSTEMS

#### 5.16.4.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-4           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.
- U-5           Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

The Initial Study, included as Appendix A, establishes that impacts associated with the following threshold would be less than significant:

- Threshold U-5

This impact will not be addressed in the following analysis.

#### 5.16.4.3 ENVIRONMENTAL IMPACTS

##### Impact Analysis

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) identified significant impacts. The applicable threshold is identified in brackets after the impact statement.

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**Impact 5.16-4: Project-generated solid waste would not be 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. [Thresholds U-4]**

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##### Construction

Prior to construction of the Specific Plan, 235 dwelling units and 27,480 of non-residential square footage would be demolished and debris moved offsite to appropriate landfills. The project applicant anticipates approximately 3,208 tons of building demolition debris and 8,496 tons of asphalt and hardscape demolition debris for a total of 11,704 tons of demolition debris.

The demolition of the existing structures may cause a strain on existing landfill capacities if waste exceeds the daily permitted capacity for the landfills serving the City. Collectively, the seven primary landfills have a daily permitted capacity of 68,904 tons per day (tpd), and an average daily disposal of 40,617 tpd, as reported in 2018 (see Table 5.16-4). Therefore, the seven landfills have a residual capacity of 28,287 tpd. As a conservative assumption, the 11,704 tons of demolition waste that would be disposed of in landfills is expected to over a period of approximately 40 days, which would result in a maximum daily disposal of approximately 293 tpd. Therefore, demolition waste would not exceed the daily maximum permitted capacity of the landfills of 1,137.9 tpd (see Table 5.16-4). Construction associated with implementation of the Specific Plan would not require an expansion of landfill capacity; construction-related impacts would be less than significant.

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#### Operational

Buildout of the Specific Plan is estimated to generate a net increase of 9,831 ppd of solid waste, as shown in Table 5.16-5.

**Table 5.16-5 Estimated Solid Waste Generation**

Land Use	Buildout	Solid Waste Generation Rate	Solid Waste Generation (ppd)
<b>Proposed Development</b>			
Residential	750 DU	4 lbs/DU per day	3,000
Commercial	157,000 SF	0.06 lbs/SF per day	9,420
<b>Existing to Be Demolished</b>			
Residential	235 DU	4 lbs/DU per day	(940)
Commercial	27,480	0.06 lbs/SF per day	(1,649)
<b>Net Increase</b>			<b>9,831</b>
Source: CalRecycle 2019k.			
Notes: SF = square feet; ppd = pounds per day; DU = dwelling units; lbs = pounds			

As detailed in Table 5.16-4, the seven landfills serving the City have residual capacity of 28,287 tpd. The estimated 9,831 ppd or 4.9 tpd generated by the Specific Plan would be adequately served by these landfills.

Overall, sufficient landfill capacity is available in the region for the estimated solid waste generated by the Specific Plan during operation. Impacts would be less than significant for the operational phase.

#### Regulatory Compliance

AB 341 requires all businesses in California that generate four cubic yards or more of waste per week to implement one of the following actions in order to reuse, recycle, compost, or otherwise divert commercial solid waste from disposal:

- Source separate recyclable and/or compostable material from solid waste and donate or self-haul the material to recycling facilities.
- Subscribe to a recycling service with their waste hauler in the service area.
- Provide recycling service to their tenants (if commercial or multifamily complex).
- Demonstrate compliance with the requirements of California Code of Regulations Title 14.

The Specific Plan would implement the requirements of the County of Los Angeles Countywide Integrated Waste Management Plan to ensure that it complies with all applicable state and federal laws, including, but not limited to, The Integrated Waste Management Act of 1989 (AV 939). A construction waste management plan would be submitted and implemented in compliance with Section 4.408 of the 2016 California Green Building Code Standards.

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***Level of Significance Before Mitigation:*** Less than Significant.

#### 5.16.4.4 CUMULATIVE IMPACTS

The area considered for cumulative impacts is the area serviced by the seven landfills listed in Table 5.16-4. Collectively, these landfills have a remaining disposal capacity of approximately 1,138 million cubic yards. All the landfills, except the Olinda Alpha landfill, have a disposal capacity beyond the 15-year horizon, as required by AB 939. Thus, there is sufficient landfill capacity in the region for the cumulative increase in solid waste disposal. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

#### 5.16.4.5 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, impact 5.16-4 would be less than significant.

#### 5.16.4.6 MITIGATION MEASURES

No mitigation measures required.

#### 5.16.4.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.16-4 would be less than significant.

### 5.16.5 Other Utilities

#### 5.16.5.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### *State*

##### ***California Energy Commission***

The California Energy Commission (CEC) was created in 1974 as the state's principal energy planning organization, in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.
- Promote research, development, and demonstration.
- Plan for and direct the state's response to energy emergencies.

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### ***California Energy Benchmarking and Disclosure***

AB 1103 (2007) requires that electric and gas utilities maintain records of the energy consumption data of all nonresidential buildings to which they provide service and that by January 1, 2009, upon authorization of a nonresidential building owner or operator, an electric or gas utility shall upload all of the energy consumption data for the specified building to the CalEPA Energy Star Portfolio Manager in a manner that preserves the confidentiality of the customer. This statute further requires a nonresidential building owner or operator disclose Energy Star Portfolio Manager benchmarking data and ratings, for the most recent 12-month period, to a prospective buyer, lessee, or lender. Enforcement of the latter requirement began on January 1, 2014.

On October 8, 2015 AB 802 was signed into law, directing the CEC to establish a statewide energy benchmarking and disclosure program and enhancing the CEC's existing authority to collect data from utilities and other entities for the purposes of energy forecasting, planning, and program design. Among the specific provisions, AB 802 would require utilities to maintain records of the energy usage data of all buildings to which they provide service for at least the most recent 12 complete months. AB 802 requires each utility, upon the request and authorization of the owner, owner's agent, or operator of a covered building, to deliver or provide aggregated energy usage data for a covered building to the owner, owner's agent, operator, or to the owner's account in the Energy Star Portfolio Manager, subject to specified requirements. AB 802 would also authorize the commission to specify additional information to be delivered by utilities for certain purposes.

### ***California Building Code: Building Energy Efficiency Standards***

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. Title 24 requires the design of building shells and building components to conserve energy, with standards updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards, which were recently adopted on May 9, 2018, go into effect starting January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements. Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient. When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.

### ***California Building Code: CALGreen***

As described earlier in this section, CALGreen was adopted as part of the California Building Standards Code and established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), as well as water conservation and material conservation, both of

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which contribute to energy conservation. As previously stated, the 2019 CALGreen standards became effective January 1, 2020.

#### ***2012 Appliance Efficiency Regulations***

The 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce reducing energy demand as well as GHG emissions.

#### ***State Greenhouse Gas Regulations***

Current State of California guidance and goals for reductions in GHG emissions from stationary sources are generally embodied in Executive Orders S-03-05 and B-30-15; AB 32, and AB 197, and SB 32. While these regulations are inherently aimed at reducing GHG emissions, they have a direct relationship to energy conservation. A detailed discussion of these regulations is provided in the GHG Emissions chapter of the EIR.

### Existing Conditions

The Plan Area is within the service area of Southern California Edison (SCE) and would be served by the existing electrical transmission lines. Gas would be provided by Long Beach Energy Resources (LBER). All dry utility connections within the Plan Area would be located within underground conduits and vaults.

#### *Electricity*

SCE’s service area spans much of Southern California from Orange and Riverside counties on the south to Santa Barbara County on the west to Mono County on the north. Total electricity consumption in SCE’s service area in gigawatt-hours (GWh) was 104,407 GWh in 2018 (CEC 2020a).<sup>2</sup> Sources of electricity sold by SCE in 2017, the latest year for which data are available, were:

- 32 percent renewable, consisting mostly of solar and wind
- 8 percent large hydroelectric
- 20 percent natural gas
- 6 percent nuclear
- 34 percent unspecified sources—that is, not traceable to specific sources (SCE 2018)<sup>3</sup>

Total estimated existing (2020) electricity demand for the Plan Area is estimated at 5,295,391 kilowatt hours (kWh) per year.<sup>4</sup>

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<sup>2</sup> One GWh is equivalent to one million kilowatt-hours.

<sup>3</sup> The electricity sources listed reflect changes after the 2013 closure of the San Onofre Nuclear Generating Station, which is owned by SCE.

<sup>4</sup> Based on the historical CalEEMod electricity rates for the apartment mid-rise, general office, health club, regional shopping center, and enclosed parking structure with elevator.



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### *Natural Gas*

Serving approximately 150,000 customers, LBER is the largest California municipal gas utility and the fifth largest municipal gas utility in the United States. LBER's service territory includes the cities of Long Beach and Signal Hill, and sections of surrounding communities including Lakewood, Bellflower, Compton, Seal Beach, Paramount, and Los Alamitos.

Long Beach receives a small amount of its gas supply directly into its pipeline system from local production fields that are located within the City's service territory, as well as offshore. Currently, the City receives approximately five percent of its gas supply from local production. The majority of the City's supplies are purchased at the California border, primarily from the Southwestern United States. The City, as a wholesale customer, receives intrastate transmission service for this gas from SoCalGas.

SoCalGas provides gas service in the City and has facilities throughout the City, including the Plan Area. The service area of SoCalGas spans much of the southern half of California, from San Luis Obispo County in the northwest to part of Fresno County in the north to Riverside County and most of San Bernardino County in the east to Imperial County in the southeast (CEC 2015b). Total natural gas supplies available to SoCalGas for years 2018 and 2019 are 3,055 million cubic feet per day (MMcf/day) and 3,385 MMcf/day, respectively (CGEU 2018). Total natural gas consumption in SoCalGas's service area was 722,247 MMcf for 2018, which is equivalent to 1,979 MMcf/day (CEC 2020b).

Existing natural gas demands for the Plan Area is estimated at 9,900,123 kilo-British thermal units per year (kBTU/yr).<sup>5</sup>

#### 5.16.5.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1      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.

#### 5.16.5.3 PLANS, PROGRAMS, AND POLICIES

#### 5.16.5.4 ENVIRONMENTAL IMPACTS

##### Impact Analysis

The following impact analysis addresses the threshold of significance for which the Initial Study (Appendix A) identified significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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<sup>5</sup> Based on the historical CalEEMod natural gas rates for the apartment mid-rise, general office, health club, and regional shopping center.

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

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#### Impact 5.16-5: Existing facilities would be able to accommodate project-generated electricity and gas demands. [Threshold U-1]

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##### Electricity

###### *Construction*

Construction activities associated with the land uses accommodated under the Specific Plan would require electricity use to power the construction equipment. The electricity use during construction would vary during different phases of construction: the majority of construction equipment during demolition and grading would be gas-powered or diesel-powered, while later construction phases would require electricity-powered equipment such as nail guns for interior construction and sprayers for architectural coatings. Overall, the use of electricity would be temporary in nature and would fluctuate according to the phase of construction. Additionally, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities. Electrical energy would be available for use during construction from the existing power lines and connections available to the Plan Area. Impacts would be less than significant.

###### *Operation*

Electricity service to the Plan Area would be provided by SCE through connections to existing offsite electrical lines. Implementation of the Specific Plan would result in a net increase in electricity use by 4,325,536 kWh/year. While the Specific Plan would increase energy demand at the site compared to existing conditions, it would be required to comply with the latest applicable Building Energy Efficiency Standards and CALGreen.

Under the 2019 Building Energy Efficiency Standards, future residential buildings of three stories and less in the Plan Area would be required to install solar PV systems. Furthermore, under the Specific Plan design standards, streetlights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians and vehicles. While this design feature would not decrease electricity demand, it would increase the amount of renewable electricity available to offset electricity demand from SCE. In addition, building orientation would be designed to maximize natural daylight and ventilation for the residential units and could contribute in minimizing electricity lighting and cooling. Overall, because the existing buildings were built and designed to comply with older building standards, the newer buildings would be more energy efficient as they would be constructed in compliance with the Specific Plan design guidelines and energy efficiency regulatory requirements, and would also be more energy efficient due to the mechanical systems utilized (e.g., building insulation) within the building envelope.

Specific Plan operation is expected to result in a net increase of 4.3 million kilowatt hours (kWh) annually at buildout. Total mid-electricity consumption in SCE's service area is forecast to increase by approximately 12,723 GWh between 2015 and 2027 (CEC 2016). SCE forecasts that it will have sufficient electricity supplies to meet demands in its service area; and the electricity demand due to the project is within the forecast increase in SCE's electricity demands. Specific Plan development would not require SCE to obtain new or expanded electricity supplies; impacts would be less than significant.

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### Natural Gas

Specific Plan operation is estimated to result in a net increase of about 9.2 million kilo British Thermal Units (kBTU) per year at buildout. The City of Long Beach Gas and Oil Department forecasts that its natural gas supplies will increase by approximately 1 MMCF/day between 2019 and 2035. That amounts to an increase of 370 million kBTU (CGEU 2016). The forecast net increase in natural gas demands due to buildout under the Specific Plan is well within City forecasts of natural gas supplies, and therefore, would not require the City to obtain new or expanded natural gas supplies.

Furthermore, the Specific Plan would comply with the requirements of the current California Building Energy and Efficiency Standards and CALGreen. All new appliances would comply with the 2012 Appliance Efficiency Regulations.

***Level of Significance Before Mitigation:*** Less than Significant.

#### 5.16.5.5 CUMULATIVE IMPACTS

The area considered for cumulative impacts to electricity supplies and facilities is SCE's service area, and the area considered for natural gas is Long Beach Gas and Oil Department's service area. Forecast total electricity and natural gas supplies for the service areas are identified above. Other projects would increase electricity and natural gas demands.

Electricity demand forecasts are based on climate zones; economic and demographic growth forecasts from Moody's Analytics, IHS Global Insight, and the California Department of Finance; forecast electricity rates; effects of reasonably foreseeable energy efficiency and energy conservation efforts; anticipated partial electrification of portions of the transportation sector, including increasing adoption of light-duty plug-in electric vehicles, demand response measures, such as electricity rates that increase during high-demand times of day, and effects of climate change (CEC 2016).

Natural gas demand forecasts are based on economic outlook, California Public Utilities Commission-mandated energy efficiency standards and programs, renewable electricity goals, and conservation savings linked to Advanced Metering Infrastructure (CGEU 2018).

It is anticipated that electricity and natural gas demands by most other projects would be accounted for in the above-referenced demand forecasts. Other projects would be subject to independent CEQA review, including analysis of impacts to electricity and natural gas supplies. Implementation of all feasible mitigation measures would be required for any significant impacts identified. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

#### 5.16.5.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval impact 5.16-6 would be less than significant.

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#### 5.16.5.7 MITIGATION MEASURES

No mitigation measures required.

#### 5.16.5.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval impact 5.16-5 would be less than significant.

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## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

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## 6. Significant Unavoidable Adverse Impacts

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At the end of Chapter 1, *Executive Summary*, is a table that summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. Mitigation measures would reduce the level of impact, but the following impacts would remain significant, unavoidable, and adverse after mitigation measures are applied:

### Air Quality

- **Impact 5.2-2:** Construction activities associated with the Specific Plan would generate short-term emissions that would exceed South Coast AQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the South Coast Air Basin (SoCAB). Mitigation Measures AQ-1 through AQ-3 would reduce criteria air pollutant emissions of VOC and NO<sub>x</sub> from construction-related activities to the extent feasible. However, construction time frames and equipment for individual site-specific projects are not available and there is a potential for multiple developments to be constructed at any one time, resulting in significant construction-related emissions. Therefore, Impact 5.2-2 would remain *significant and unavoidable*.
- **Impact 5.2-5:** Construction-related emissions associated with land uses accommodated under the Specific Plan would expose sensitive receptors to substantial concentrations of criteria air pollutants. Implementation of Mitigation Measures AQ-1 and AQ-2, which would require implementation of project-specific measures would contribute to reducing the Specific Plan's regional construction emissions and therefore, also result in a reduction of localized construction-related criteria air pollutant and TACs emissions to the extent feasible. However, because existing sensitive receptors may be close to project-related construction activities, construction emissions generated by individual development projects have the potential to exceed South Coast AQMD's project-specific LSTs and health risk thresholds. Furthermore, because of the scale of development activity associated with buildout of the Specific Plan, it is not possible to determine whether the scale and phasing of individual development projects would result in the exceedance of the localized emissions thresholds and contribute to known health effects. Therefore, Impact 5.2-5 would remain *significant and unavoidable*.

### Greenhouse Gas Emissions

- **Impact 5.6-1:** Build out of the Specific Plan would generate a net increase in greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Implementation of Mitigation Measures GHG-1 and GHG-2 would reduce GHG emissions to the extent feasible. The Specific Plan includes transportation demand management (TDM) measures to further reduce parking demand and VMT, such as employee flexible work programs, subsidized transit passes, and carpool/carshare programs. However, because the number of people who may use alternative modes of

## 6. Significant Unavoidable Adverse Impacts

transportation is uncertain, the total reductions cannot be quantified. The lead agency (City of Long Beach) cannot substantively or materially affect reductions in project mobile-source emissions beyond the regulatory requirements. Further, significant cultural shifts and technological innovation is required to achieve the state's long-term GHG emissions goals. The City has no jurisdictional control or responsibility for GHG reductions in other parts of California, the nation or the globe, all of which contribute to climate change. In addition, the City does not have jurisdiction to enforce statewide implementation of all of the applicable GHG-reducing regulatory programs. Although other agencies with the necessary jurisdiction are currently taking action to reduce GHG emissions, the City cannot assure that these measures would ultimately be implemented or be adequate to address climate change. In light of these considerations, as well as the global nature climate change, the Specific Plan's incremental contribution to the global GHG emissions inventory would be considered cumulatively considerable and this cumulative impact is significant and unavoidable, even though the project satisfies several compliance options identified by the *Newhall* case. Impact 5.4-1 would remain ***significant and unavoidable***.

### Noise

- **Impact 5.10-1:** Temporary construction activities would elevate the existing noise ambient exposing existing and future residences at Century Villages at Cabrillo above 80 dBA  $L_{eq}$  noise levels. Mitigation Measure N-1 would provide noise attenuation to sensitive receptors and reduce potential noise impacts during construction to the extent feasible. However, demolition and construction activities are proposed to adjacent residential buildings, and though construction is temporary, it would be phased over a 10-year period. Provided the limitation of attenuation that mitigation measures provide, specifically to upper level dwelling units to multi-story residential buildings, Impact 5.10-1 would remain ***significant and unavoidable***.
- **Impact 5.10-3:** Temporary construction activities could generate vibration levels in excess of 0.20 in/sec PPV, potentially causing architectural damage to existing and future structures at Century Villages at Cabrillo. Adhering to Mitigation Measure N-2 and the screening distances provided in Table 5.10-10, in tandem with a vibration analysis, would reduce potential impacts associated with vibration. However, due to the nature of infill development and the proximity of new development to existing structures strict adherence to the screening distances is not possible in all cases. In those instances, the owner/developer must utilize best efforts to minimize duration and maximize distance between equipment and existing building. Impact 5.10-3 would remain ***significant and unavoidable***.



## 7. Alternatives to the Proposed Project

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### 7.1 INTRODUCTION

#### 7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would “feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives” (CEQA Guidelines § 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the Century Villages at Cabrillo Specific Plan (Specific Plan).

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives’ analysis in an EIR. Key provisions are:

- “[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” (15126.6[b])
- “The specific alternative of ‘no project’ shall also be evaluated along with its impact.” (15126.6[e][1])
- “The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” (15126.6[e][2])
- “The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.” (15126.6[f])
- “Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)” (15126.6[f][1]).
- “Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.” (15126.6[f][2][A])

## 7. Alternatives to the Proposed Project

- “An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.” (15126.6[f][3])

For each development alternative, this analysis:

- Describes the alternative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, “[i]f an alternative would cause...significant effects in addition those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.”

### 7.1.2 Project Objectives

As described in Section 3.2, *Project Objectives*, of Chapter 3, *Project Description*, the following objectives have been established for the Specific Plan and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts.

1. Integrate both new and rehabilitated residential development for the express purpose of providing transitional housing and support services to homeless veterans and the homeless population of the region.
2. Allow for the long-term development and enhancement of the Century Villages at Cabrillo community to anchor residents, meet the evolving needs of the community and provide necessary support of resident’s mental, physical, and emotional health.
3. Enhance the safety, livability, and connectivity of the Century Villages at Cabrillo community.
4. Guide redevelopment of an antiquated building stock and available land in order to accommodate increased demand for housing and services, while increasing energy efficiency.
5. Develop enhanced and expanded open space and connectivity throughout the community to serve the needs of residents and employees.
6. Provide housings and services near the West Long Beach Transit Center and within a transit priority area consistent with Statewide and regional goals to reduce vehicle miles traveled.
7. Enhance the continued fiscal health, viability, and success of the Century Villages at Cabrillo community.

## 7. Alternatives to the Proposed Project

### 7.2 ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this Draft Environmental Impact Report (DEIR).

#### 7.2.1 Alternative Development Areas

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (CEQA Guidelines § 15126[5][B][1]). In addition, an alternative site need not be considered when implementation is “remote and speculative,” such as when the alternative site is beyond the control of a project applicant.

In general, any development of the size and type proposed by the Project would have substantially the same impacts on air quality, cultural resources, greenhouse gas emissions, noise, population and housing, public services, recreation, tribal cultural resources, and utilities and service systems. Since the City is highly urbanized, impacts to traffic would also occur in other areas of the City. On the other hand, without a site-specific analysis, impacts on aesthetics, biological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and mineral resources cannot be evaluated. However, these impacts were found to be less than significant or less than significant with mitigation incorporated for the Project. Therefore, another location would not avoid or substantially lessen the significant effects of the proposed Project.

As discussed in the Century Villages at Cabrillo Specific Plan, the Project area encompasses the entirety of the 27-acre Villages at Cabrillo, an established residential community intended to break the cycle of homelessness. Redevelopment of the site pursuant to the Project Applicant’s mission would provide quality dwelling units for residents in need, while hosting modern spaces for current and new social service providers, commercial uses, community amenities. Redevelopment of underutilized properties with new modern buildings meeting the most recent code requirements reduces impacts on the environment by reducing operational air quality and greenhouse gas emissions and connecting to existing available infrastructure.

Residents, the property owner, and the City have long recognized the importance of this area to the City and emphasized the need for thoughtful long-term planning. The purpose of the Specific Plan is to provide a regulatory framework that is tailored specific for this area. It includes customized land uses and development standards, design guidelines, and provides enhanced pedestrian connections and multimodal transportation choices. The Specific Plan is suited particularly for the Project area, placing this Specific Plan or ultimate development in another area of the City is not feasible, nor does the Project Applicant have ownership or control of another similar sized property that could accommodate the proposed development. Therefore, considering another site would be too remote and speculative.

## 7. Alternatives to the Proposed Project

### 7.2.2 Project Under Existing Zoning

The Project Under Existing Zoning Alternative would consider the development of the Project site with uses that conform to the existing zoning standards for the Plan Area, which is Subarea D of PD-31. The subarea is intended to promote the adaptive reuse of the existing housing and support facility buildings to provide transitional housing and support services to homeless veterans and the homeless population in the City. However, under existing conditions, the Plan Area is generally built out. Under this alternative, the total residential units and non-residential square footage would be similar to existing conditions, which has been analyzed below under the “No Project/No Development Alternative.” Therefore, this alternative has not been analyzed further.

### 7.2.3 Other Alternatives to Reduce Construction-Related Impacts

The Specific Plan would result in significant and unavoidable impacts related to air quality and noise during construction. Although construction activities would result in significant impacts for air quality emissions and noise, these impacts are temporary in nature and primarily resulting from the fact that 1) this Project is an infill development with close proximity to on site sensitive receptors and 2) the construction time frames and equipment for individual site-specific projects and potential overlap of activities at any one time is not available. The DEIR also analyzed the worst-case potential conditions. Furthermore, because existing sensitive receptors may be close to project-related construction activities, construction emissions generated by individual development projects have the potential to exceed South Coast AQMD’s project-specific LSTs and health risk thresholds. Again, the DEIR was based on the most conservative construction scenario and conservatively determined that it is not possible to determine whether individual development projects would result in the exceedance of the localized emissions thresholds and contribute to known health effects, due to the scale of development activities. Any redevelopment and associated construction activities that would occur within a community of this size, scale, and building orientation would have similar construction-related impacts due to the proximity of on-site sensitive receptors. Therefore, because implementation of the Specific Plan involves redevelopment of an infill site and construction activities near existing on-campus residents, other alternatives, such as alternative land uses or a substantial reduction in the size of the project, would result in similar construction-related impacts to air quality and noise.

With respect to construction-related noise impacts, demolition and construction activities are proposed to adjacent to residential buildings. Although all feasible mitigation measures were incorporated, due to the limited attenuation that can be provided through mitigation, specifically to upper-level dwelling units of multi-story residential buildings, any redevelopment project would result in significant impacts to adjacent residential buildings. Furthermore, due to the nature of infill development and the proximity of any new redevelopment to existing structures, strict adherence to the screening distances is not possible in all cases. Eliminating construction-related noise impacts by vacating the property until construction is complete is not feasible.

Over long-term buildout, implementation of the Specific Plan would replace and rehabilitate outdated buildings with new modern facilities that would comply with the latest CBC and CalGreen standards, while increasing long term energy efficiency and reducing noise impacts. Therefore, other alternatives to reduce construction-related air quality and noise impacts, except as indicated below, have not been analyzed further.

## 7. Alternatives to the Proposed Project

### 7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Based on the criteria listed above, the following alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the Specific Plan but may avoid or substantially lessen any of the significant effects of the Specific Plan. These alternatives are analyzed in detail in the following sections.

- No Project/No Development Alternative
- Reduced Intensity Alternative

An EIR must identify an “environmentally superior” alternative and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the Specific Plan and determined to be environmentally superior, neutral, or inferior. However, only those impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the Specific Plan. Impacts found to be significant and unavoidable include air quality (construction), greenhouse gas emissions, and noise (construction) (see Chapter 6, *Significant Unavoidable Adverse Impacts*, of this DEIR). Section 7.5 identifies the environmentally superior alternative.

#### 7.3.1 Alternatives Comparison

Table 7-1, *Building Statistical Summary*, provides a comparison of buildout projections determined by the land use alternatives, including the Specific Plan. Table 7-1 identifies information regarding dwelling unit, population, nonresidential square feet, and employment for each of the alternatives.

**Table 7-1 Net New Development Statistical Summary**

	Specific Plan	No Project/No Development Alternative	Reduced Intensity Alternative <sup>1</sup>
Net New Dwelling Units	515	0	464
Net New Population	1,442	0	1,298
Nonresidential Square Feet			
Amenities	66,970	12,380	60,273
Education	4,800	10,200	4,320
Commercial/Retail	17,000	5,850	15,300
Services/Administration	40,750	26,300	36,675
New Employment	267	-	240

Note: Refer to Section 5.11, Population Housing, of this DEIR, for the assumptions and calculations used to determine population and employment.

1. The Reduced Intensity Alternative is the reduction of the proposed net new development intensity by 10 percent.

### 7.4 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

Section 15126.6(e) of the CEQA Guidelines requires analysis of the No Project/No Development Alternative. In accordance with the CEQA Guidelines, the No Project/No Development Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed as

## 7. Alternatives to the Proposed Project

provided by Section 15126.6(e)(3)(B) of the CEQA Guidelines. Section 15126.6(e)(3)(B) provides that, “In certain instances, the no project alternative means ‘no build’ wherein the existing environmental setting is maintained.”

The No Project/No Development Alternative assumes the Specific Plan would not be adopted or implemented. It also assumes that no new development would occur and the Plan Area would remain in its existing condition and be considered built out. Therefore, all existing land uses, improvements, and services would remain with no additional development in the future. Some minor population growth could occur within the Plan Area, to the extent that existing residential units could accommodate additional residents (e.g., a decrease in vacancy rates). The existing development consists of 865 residential dwelling units and 54,730 non-residential square feet. None of the impacts of the Specific Plan, adverse or beneficial, would result under this alternative.

### 7.4.1 Aesthetics

Under the No Project/No Development Alternative, no new development would occur in the Plan Area and all existing land uses, improvements, and services would remain. The existing visual character and resources would remain as is—the residential and nonresidential uses that would occur under the Specific Plan would not be developed. However, the various visual improvements that would be introduced throughout the Plan Area under the Specific Plan (e.g., new and rehabilitated buildings and site improvements, new landscaping and open space, building form and architectural design) also would not occur under this alternative. In contrast to this alternative, the Specific Plan is intended to integrate both new and rehabilitated residential development (Objective 1), guide redevelopment of an antiquated building stock and available land (Objective 4), and develop enhanced and expanded open space and connectivity throughout the community (Objective 5). Additionally, the Specific Plan’s aesthetic and visual resource impacts were determined to be less than significant. Aesthetic impacts under this alternative would be greater compared to the Specific Plan, but still would be less than significant.

### 7.4.2 Air Quality

Under the No Project/No Development Alternative, no new development or construction and demolition activities (and related air quality emissions) would occur. Therefore, the Specific Plan’s significant and unavoidable construction-related emissions impact would be eliminated under this alternative. Additionally, since this alternative would not result in increased traffic, associated air emissions would remain as is and less than the Specific Plan. Therefore, traffic-related operational air emissions would be reduced. Additionally, unlike the Specific Plan, this alternative would not integrate both new and rehabilitated residential development (Objective 1), allow for the long-term development and enhancement of the Plan Area (Objective 2), and guide redevelopment of an antiquated building stock and available land (Objective 4). However, the Specific Plan’s operational-related air quality impacts were determined to be less than significant. Overall, air quality impacts under this alternative would be reduced compared to the Specific Plan, and would be less than significant.

## 7. Alternatives to the Proposed Project

### 7.4.3 Cultural Resources

Under the No Project/No Development Alternative, no new development would occur in the Plan Area; therefore, this alternative would not result in the potential to encounter unknown subsurface archaeological resources that may exist beneath the ground surface during ground-disturbing activities. Additionally, unlike the Specific Plan, this alternative would not integrate both new and rehabilitated residential development (Objective 1), allow for the long-term development and enhancement of the Plan Area (Objective 2), and guide redevelopment of an antiquated building stock and available land (Objective 4). However, the Specific Plan's cultural resource impacts (both archeological and historical) were determined to be less than significant. Overall, cultural resource impacts under this alternative would be reduced compared to the Specific Plan, and would be less than significant.

### 7.4.4 Energy

The No Project/No Development Alternative would not result in the generation of a temporary increase in energy and fuel use during construction activities and would not generate a long-term increase in energy and fuel use during project operation due to the increase in intensity. Additionally, unlike the Specific Plan, this alternative would not guide redevelopment of an antiquated building stock and available land while increasing energy efficiency (Objective 4). However, the Specific Plan's energy impacts (both construction and operational) were determined to be less than significant. Overall, energy impacts under this alternative would be reduced compared to the Specific Plan, and would be less than significant.

### 7.4.5 Geology and Soils

No new construction activities, including demolition and grading, would occur under the No Project/No Development Alternative. Therefore, there would be no potential for additional residents, workers, buildings, and structures to experience seismic ground shaking, liquefaction, subsidence, or expansion throughout the Plan Area. Additionally, this alternative would not result in the potential to encounter unknown subsurface paleontological resources that may exist beneath the ground surface during ground-disturbing activities. However, many buildings throughout the Plan Area were built before current seismic safety codes; therefore, this alternative, by retaining older buildings, could expose people to greater hazards from strong ground shaking. Additionally, the Specific Plan's impacts to geology and soils (seismic ground shaking, liquefaction, subsidence, or expansion) were determined to be less than significant. Furthermore, the Specific Plan's impacts to paleontological resources were determined to be less than significant with implementation of mitigation. Overall, geology and soils impacts of this alternative would be similar to those of the Specific Plan, and would be less than significant.

### 7.4.6 Greenhouse Gas Emissions

The No Project/No Development Alternative assumes the Plan Area is built out and no new development would occur. While implementation of the Specific Plan would further options for alternative modes of travel through the creation of pedestrian, bicycle and public transit improvements and services by adding a greater mix of uses, it would also allow for greater development that would generate greater amounts of GHG

## 7. Alternatives to the Proposed Project

emissions than existing conditions. This alternative would result in a reduction of GHG emissions, and the Specific Plan's significant and unavoidable GHG emissions impact would be eliminated. Additionally, unlike the Specific Plan, this alternative would not guide redevelopment of an antiquated building stock and available land while increasing energy efficiency (Objective 4). Overall, impacts under this alternative would be reduced compared to the Specific Plan, and would be less than significant.

### 7.4.7 Hazards and Hazardous Materials

Under this alternative, the Plan Area is assumed to be built out and no new development would occur. There would be no new potential to expose the public to hazardous materials through routine transport and use or through a possible accident due to release of hazardous materials that could occur during the construction and operational phases of the development accommodated by the Specific Plan. Additionally, the potential for asbestos-containing materials and lead based paint to be released during the demolition of building and structures under the Specific Plan would not occur, as no new development would occur under this alternative. However, the Specific Plan's impacts related to hazards and hazardous materials were determined to be less than significant. Additionally, unlike the Specific Plan, this alternative would not integrate both new and rehabilitated residential development (Objective 1), allow for the long-term development and enhancement of the Plan Area (Objective 2), and guide redevelopment of an antiquated building stock and available land (Objective 4). Overall, impacts of this alternative would be reduced compared to the Specific Plan, and would be less than significant.

### 7.4.8 Hydrology and Water Quality

Existing water quality conditions, groundwater supplies, drainage patterns, and runoff water amounts would remain as is under this alternative as no new development would occur. This alternative would not introduce new sources of water pollutants (from either construction or operations phases of development projects) to the Plan Area. Additionally, this alternative would not require the storm drain facility improvements that would be required under the Specific Plan. However, this alternative would not include the development of new low-impact development (LID), source control, site design, and treatment control best management practices (BMPs) to minimize runoff and water pollutants, which would occur under the Specific Plan. These required measures have a beneficial impact on stormwater quality. Additionally, the Specific Plan's impacts related to hydrology and water quality were determined to be less than significant. Overall, hydrology and water quality impacts would be slightly greater under this alternative compared to the Specific Plan, but would remain less than significant.

### 7.4.9 Land Use and Planning

Given that the Specific Plan would not be adopted, this alternative would not require an amendment to the Long Beach Zoning Ordinance and Zoning Map. The existing Regional Serving Facility (RSF) place type of the Plan Area would remain and no new development would occur. However, unlike the Specific Plan this alternative would not integrate both new and rehabilitated residential development (Objective 1), allow for the enhancement of the Century Villages at Cabrillo community (Objective 2), guide redevelopment of an antiquated building stock and available land (Objective 4), or develop enhanced and expanded open space and



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connectivity throughout the community (Objective 5). New development standards and design guidelines to enhance the character, mobility, and streetscape of the Plan Area would also not be implemented. Furthermore, the Specific Plan's impacts to land use and planning were determined to be less than significant. Overall, land use impacts of this alternative would be similar to those of the Specific Plan, and would be less than significant.

### 7.4.10 Noise

Under this alternative no new development would occur. Therefore, this alternative would eliminate the Specific Plan's significant and unavoidable construction-related noise impacts related. Additionally, no new operational noise (mobile or stationary) would be generated given that no development would occur under this alternative. Additionally, unlike the Specific Plan, this alternative would not integrate both new and rehabilitated residential development (Objective 1), allow for the long-term development and enhancement of the Plan Area (Objective 2), and guide redevelopment of an antiquated building stock and available land (Objective 4). Overall, impacts would be reduced under this alternative compared to the Specific Plan, and would be less than significant.

### 7.4.11 Population and Housing

Population growth would not occur under the No Project/No Development Alternative because no new residential units would be proposed. However, the Specific Plan's impacts to population and housing were determined to be less than significant. Additionally, unlike the Specific Plan this alternative would not include the integration of both new and rehabilitated residential development (Objective 1) and the long-term development and enhancement of the Century Villages at Cabrillo community (Objective 2). Therefore, this alternative would leave out much needed opportunities for additional housing and services for both the Century Villages at Cabrillo community and the homeless population of the Long Beach metropolitan area. Overall, population and housing impacts would be greater under this alternative compared to the Specific Plan, but would remain less than significant.

### 7.4.12 Public Services

Existing housing, population, nonresidential uses (education, commercial/retail, and service/administration) and workers in the Plan Area would remain under this alternative. There would be no increase in demand for fire protection, police protection, schools, or libraries. However, the Specific Plan's impacts to public services were determined to be less than significant. Overall, public services impacts would be reduced under this alternative compared to the Specific Plan, and would be less than significant.

### 7.4.13 Recreation

Under the No Project/No Development Alternative, no new residents or employees would be introduced to the Plan Area, which would reduce impacts resulting from additional demand on parks and recreational facilities in the City. However, the Specific Plan's impacts on parks and recreational facilities were determined to be less than significant. Additionally, unlike the Specific Plan, this alternative would not enhance the livability and connectivity of the Century Villages at Cabrillo community (Objective 3) or develop enhanced and expanded open space and connectivity throughout the community (Objective 5). Overall, impacts to parks and

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recreational facilities would be slightly greater under this alternative compared to the proposed Project, but would remain less than significant.

### 7.4.14 Transportation

Under this alternative, no new housing units, residents, employees, or nonresidential uses (education, commercial/retail, and service/administration) would be introduced into the Plan Area. The increase in vehicle miles traveled (VMT) that would occur under the Specific Plan would not occur under this alternative. However, the Specific Plan's transportation impacts related to VMT were determined to be less than significant. Additionally, unlike the Specific Plan, this alternative would not enhance the livability and connectivity of the Century Villages at Cabrillo community (Objective 3). Overall, impacts would be reduced under this alternative compared to the Specific Plan, and would be less than significant.

### 7.4.15 Tribal Cultural Resources

Under the No Project/No Development Alternative, no new development would occur in the Plan Area; therefore, this alternative would not result in the potential to encounter unknown subsurface tribal cultural resources that may exist beneath the ground surface during ground-disturbing activities. However, the Specific Plan's tribal cultural resource impacts were determined to be less than significant with mitigation incorporated. Additionally, unlike the Specific Plan, this alternative would not integrate both new and rehabilitated residential development (Objective 1), allow for the long-term development and enhancement of the Plan Area (Objective 2), and guide redevelopment of an antiquated building stock and available land (Objective 4). Overall, cultural resource impacts under this alternative would be reduced compared to the Specific Plan, and would be less than significant.

### 7.4.16 Utilities and Service Systems

No new development and population or employment increase under this alternative would mean that existing water supply demand in the Plan Area would remain the same; wastewater and solid waste generation would also remain the same. In comparison, the Specific Plan would introduce new housing units, residents, employees, or nonresidential uses, which would result in an increase water demands and wastewater and solid waste generation. However, the Specific Plan's impacts on utilities and service systems were determined to be less than significant. Additionally, unlike the Specific Plan, this alternative would not integrate both new and rehabilitated residential development (Objective 1), allow for the long-term development and enhancement of the Plan Area (Objective 2), and guide redevelopment of an antiquated building stock and available land (Objective 4). Overall, impacts to utilities and service system would be reduced under this alternative compared to the Specific Plan, and would be less than significant.

### 7.4.17 Conclusion

#### 7.4.17.1 ABILITY TO REDUCE IMPACTS

The No Project/No Development Alternative would eliminate the significant and unavoidable impacts related to air quality (construction), GHG emissions, and noise (construction) that would occur from implementation

## 7. Alternatives to the Proposed Project

of the Specific Plan. This alternative would also reduce impacts related to air quality (operational), cultural resources, energy, hazards and hazardous materials, noise (operational), public services, transportation, tribal cultural resources, and utilities and service systems. Impacts related to aesthetics, hydrology and water quality, population and housing, and recreation would be greater under this alternative; impacts to geology and soils and land use and planning would be similar compared to the Specific Plan.

### 7.4.17.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

Implementation of the No Project/No Development Alternative means that no new development would occur in the Plan Area, and all but one of the project objectives (Objective 6, “Provide housing and services near the West Long Beach Transit Center and within a transit priority area consistent with Statewide and regional goals to reduce vehicle miles traveled”) would not be achieved under this alternative. This alternative would not integrate both new and rehabilitated residential development for transitional housing and support services to homeless veterans and the homeless population of the Long Beach metropolitan area (Objective 1); allow for the long-term development and enhancement of the community (Objective 2); enhance the safety, livability, and connectivity of the community (Objective 3); guide redevelopment of an antiquated building stock and available land (Objective 4); develop enhanced and expanded open space and connectivity throughout the community (Objective 5); or enhance the continued fiscal health, viability, and success of the Century Villages at Cabrillo community (Objective 7).

## 7.5 REDUCED INTENSITY ALTERNATIVE

The Reduced Intensity Alternative was analyzed to reduce environmental impacts related to air quality, GHG emissions, and noise. To accomplish the reduction, this alternative would reduce the proposed net new development intensity by 10 percent. As shown in Table 7-1, this alternative would result in a net increase of 464 dwelling units and 116,568 square feet of nonresidential uses (amenities, education, commercial/retail, and service/administration). The development area under this alternative would be the same as with the Specific Plan, 27 acres. Like the Project, this alternative would require adoption of the Specific Plan.

### 7.5.1 Aesthetics

Under this alternative, the intensity of proposed net new development would be reduced by 10 percent resulting in less building construction and other site improvements. Given that less development would occur, this alternative would result in less change to the existing visual character and contribute fewer new sources of light and glare to the Plan Area. However, impacts associated with the Reduced Intensity Alternative would be similar to the Specific Plan because it would result in a similar development area and would require compliance with the provisions of the Specific Plan. Although buildout intensity would be reduced, heights, setbacks, building forms, and other development standards and design guidelines would still apply. Aesthetics impacts under this alternative would be less than significant. Furthermore, this alternative could meet Objective 4 relating to redevelopment of an antiquated building stock and available land and Objective 5 relating to development of enhanced and expanded open space, but to a lesser extent than the Specific Plan. Therefore, impacts of this alternative would be similar to the Specific Plan.

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### 7.5.2 Air Quality

This alternative would result in a decrease in housing units, residents, employees, and nonresidential uses in the Plan Area, thereby also decreasing construction and operation emissions compared to the Specific Plan. Operation-related criteria air pollutant generated from stationary and mobile sources would decrease due to the reduced intensity of this alternative. Additionally, as with the Specific Plan, operational-related air quality impacts under this alternative would be less than significant. However, there is still the potential for multiple developments to be constructed at any one time; therefore, as with the Specific Plan, significant and unavoidable construction-related emissions would still occur under this alternative. Furthermore, this alternative could meet all objectives, but to a lesser extent than the Specific Plan. Overall, impacts to air quality under this alternative would slightly decrease compared to the Specific Plan.

### 7.5.3 Cultural Resources

Compared to the Specific Plan, the amount of development intensity would decrease under this alternative. However, this alternative would impact a similar development area that would be impacted under the Specific Plan. Additionally, as with the Specific Plan, cultural resources impacts (archeological and historic) under this alternative would be less than significant. Therefore, cultural resources impacts under this alternative would be similar to those of the Specific Plan.

### 7.5.4 Energy

This alternative would result in a reduction in building energy compared to the Specific Plan, as well as fewer vehicle trips and associated fuel use. In addition, the reduction in building square footage would not require as much electricity and natural gas for building cooling and heating needs; therefore, this Alternative would reduce energy demands. During construction, the reduction in building square footage would also require slightly less fuel as the vertical and/or horizontal building construction phase would be shortened. Additionally, as with the Specific Plan, energy impacts under this alternative would be less than significant. Furthermore, this alternative could meet Objective 4 relating to redevelopment of an antiquated building stock and available land while increasing energy efficiency, but to a lesser extent than the Specific Plan. Overall, impacts under this alternative would be reduced compared to the Specific Plan.

### 7.5.5 Geology and Soils

Geology and soils impacts related to seismic ground shaking, liquefaction, subsidence, and soil expansion would be similar to those that would occur under the Specific Plan because the impacted development area would be similar under this alternative. This alternative would impact the same development area that would be impacted under the Specific Plan; therefore, the potential of impacting unknown subsurface paleontological resources remains the same. As with the Specific Plan, paleontological resources impacts under this alternative would be less than significant with implementation of mitigation. Overall, geology and soils impacts under this alternative would be similar.

## 7. Alternatives to the Proposed Project

### 7.5.6 Greenhouse Gas Emissions

The Reduced Intensity Alternative would result in a decrease in housing units, residents, employees, and nonresidential uses in the Plan Area, thereby also decreasing construction and operation GHG emissions compared to the Specific Plan. A proportional 10 percent decrease in GHG emissions would reduce emissions just below SCAG's 3,000 MT CO<sub>2e</sub> threshold, and impacts would be less than significant. It should be noted that the GHG emissions associated with Specific Plan implementation resulted in a slight increase over the 3,000 MT CO<sub>2e</sub> threshold. The Specific Plan incorporates all feasible mitigation measures to reduce GHG impacts. Mitigation Measures GHG-1 and GHG-2 require new development to be either certified LEED Silver Level or comply with the voluntary measures of CALGreen and install Energy Star certified appliances in residential projects. Additionally, the Specific Plan includes transportation demand management (TDM) measures to further reduce parking demand and VMT, such as employee flexible work programs, subsidized transit passes, and carpool/carshare programs. However, because the number of people who may use alternative modes of transportation is uncertain, the total reductions cannot be quantified. The lead agency (City of Long Beach) cannot substantively or materially affect reductions in project mobile-source emissions beyond the regulatory requirements, which is the main source of GHG emissions for the Specific Plan. Therefore, although this alternative could demonstrate achieving a reduction in GHG emissions below the significance threshold, the DEIR used a conservative approach in measuring GHG emission impacts. Furthermore, this alternative could meet Objective 4 relating to redevelopment of an antiquated building stock and available land while increasing energy efficiency, but to a lesser extent than the Specific Plan. Therefore, this alternative would eliminate the Project's significant and unavoidable GHG emissions impact.

### 7.5.7 Hazards and Hazardous Materials

Similar to the Specific Plan, buildout of the Reduced Intensity Alternative could result in the potential to expose the public to hazardous materials through routine use, storage, transport and disposal of hazardous materials or through a possible accident due to release of hazardous materials that could occur during the construction and operational phases of the development that would be accommodated by this alternative. Additionally, there is the potential for asbestos-containing materials and lead based paint to be released during the demolition of building and structures under this alternative. However, similar to the proposed Project, new development is not expected to involve the use of large amounts of hazardous materials. Hazards to the public or the environment arising from the routine use, storage, transport, and disposal of hazardous materials during operation of this alternative would not occur. Additionally, any demolition activities and the use, storage, transport, and disposal of hazardous materials would be required to comply with the appropriate state and local standards, guidelines, and requirements of responsible agencies (e.g., DTSC, RWQCB, LBFD). As such, impacts related to hazards for this alternative would be less than significant with mitigation. Overall, impacts would be similar under this alternative compared to the Specific Plan.

### 7.5.8 Hydrology and Water Quality

Under the Reduced Intensity Alternative, there would be a reduction in new development, which would result in a slight reduction in impervious surfaces. Additionally, as with the Specific Plan, this alternative would introduce new sources of water pollutants (from either construction or operations phases of development

## 7. Alternatives to the Proposed Project

projects) to the Plan Area, as new development would occur. This alternative would also require the storm drain facility improvements that would be required under the Specific Plan. This alternative would also include the development of new low-impact development (LID), source control, site design, and treatment control best management practices (BMPs) to minimize runoff and water pollutants. As with the Specific Plan, compliance with water quality regulations would reduce water quality impacts to less than significant. Furthermore, this alternative could meet all objectives, but to a lesser extent than the Specific Plan. Overall, hydrology and water quality impacts would be slightly reduced under this alternative compared to the Specific Plan.

### 7.5.9 Land Use and Planning

Similar to the Specific Plan, this alternative would require an amendment to the Long Beach Zoning Ordinance and Zoning Map and adoption of the Specific Plan. However, development of the Plan Area would occur in accordance with the provisions of the Specific Plan, which would serve as the regulatory zoning document for the Plan Area. New development standards and design guidelines to enhance the character, mobility, and streetscape of the Plan Area would also be implemented under this alternative. This alternative would result in less than significant impacts related to land use and planning. Overall, land use impacts of this alternative would be similar to those of the Specific Plan.

### 7.5.10 Noise

The Reduced Intensity Alternative would involve the same general phases of construction as the Project (i.e., demolition, site grading, building construction, and finishing/landscape installation) and cover the same general development impact area. However, the building construction and finishing phases would be reduced under compared to the Project because of a 10 percent reduction in building square footage. As with the Project, construction of this alternative would generate noise from the use of heavy-duty construction equipment as well as from haul truck and construction worker trips. Due to the reduction in building size, the overall duration of construction would be reduced. Notwithstanding, on-site construction activities and the associated construction noise and vibration levels would be expected to be similar during maximum activity days since only the overall duration, and not the daily intensity of construction activities and associated equipment noise, would decrease under this alternative when compared to the Project. Noise and vibration levels during maximum activity days, which are used for measuring impact significance, would be similar to those of the Project and significant and unavoidable.

The Reduced Intensity Alternative would reduce daily vehicle trips compared to the Specific Plan. This would slightly decrease long-term noise impacts from vehicle sources. However, no significant long-term noise impacts were identified with the Specific Plan. Similar to the Project, vehicular-related noise impacts would be less than significant. Furthermore, this alternative could meet all objectives, but to a lesser extent than the Specific Plan. Overall, this alternative would result in a slight reduction of noise impacts.

### 7.5.11 Population and Housing

Under the Reduced Intensity Alternative, buildout would result in 27 fewer jobs and 52 fewer residents. Additionally, this alternative would provide fewer housing units and nonresidential uses (education,

## 7. Alternatives to the Proposed Project

commercial/retail, and service/administration) compared to the Specific Plan. However, under this alternative and similar to the Specific Plan, the population, housing, and employment at buildout would be consistent with the City's growth projections identified in SCAG's RTP/SCS. Overall, impacts to population and housing would remain less than significant with this alternative and similar to the proposed Project.

### 7.5.12 Public Services

Under the Reduced Intensity Alternative, residential and nonresidential development would be reduced by 10 percent. This would result in a corresponding reduction in demands placed on public services, including fire protection, law enforcement, schools, and library services. However, as with the Specific Plan impacts would be less than significant. Furthermore, this alternative could meet all objectives, but to a lesser extent than the Specific Plan. Overall, impacts under this alternative would be less than significant and would be reduced compared to the Specific Plan since there would be less residential and nonresidential development and fewer residents and employees at full buildout.

### 7.5.13 Recreation

Under the Reduced Intensity Alternative, the demands on existing recreational facilities would be reduced due to the reduction in overall population. Less parkland would be required to serve the projected population at buildout. Additionally, as with the Specific Plan, this alternative would enhance the livability and connectivity of the Century Villages at Cabrillo community (Goal 3) and develop enhanced and expanded open space and connectivity throughout the community (Objective 5), but to a slightly reduced extent. Overall, impacts to parks and recreational facilities would be less than significant and similar under this alternative compared to the proposed Project.

### 7.5.14 Transportation

Under this alternative, lesser new housing units, residents, employees, and nonresidential uses (education, commercial/retail, and service/administration) would be introduced into the Plan Area. Therefore, the increase in VMT that would occur under the Specific Plan would also occur under this alternative, but to a lesser extent. However, as with the Specific Plan, transportation impacts related to VMT under this alternative would be determined to be less than significant. Furthermore, this alternative could meet Objective 3 relating to enhance the livability and connectivity of the Century Villages at Cabrillo community, but to a lesser extent than the Specific Plan. Overall, impacts would be reduced under this alternative compared to the Specific Plan.

### 7.5.15 Tribal Cultural Resources

Compared to the Specific Plan, the amount of development intensity would decrease under this alternative. However, development under this alternative would impact the same development area that would be impacted under the Specific Plan. Additionally, as with the Specific Plan, tribal cultural resources impacts under this alternative would be less than significant with mitigation incorporated. Therefore, tribal cultural resources impacts under this alternative would be similar to those of the Specific Plan.

## 7. Alternatives to the Proposed Project

### 7.5.16 Utilities and Service Systems

Under the Reduced Intensity Alternative, impacts to utilities and service systems would be reduced due to the reduction in residential and nonresidential intensity. This alternative would also reduce the generation of wastewater and solid waste and the need for potable water. Overall, impacts would be reduced under this alternative, and similar to the Specific Plan, would remain less than significant.

### 7.5.17 Conclusion

#### 7.5.17.1 ABILITY TO REDUCE IMPACTS

The Reduced Intensity Alternative would reduce (but not eliminate) significant and unavoidable impacts associated with air quality and noise compared to the Specific Plan. The Project's significant and unavoidable GHG impact would be eliminated under this alternative. Impacts related to aesthetics, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, population and housing, public services, recreation, transportation, and utilities and service systems would remain the same as or be slightly reduced compared to the Specific Plan, as demonstrated above, since it would involve the same mix of land uses (although at a reduced intensity) and development area. This alternative would not increase impacts for any environmental topical area.

#### 7.5.17.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

Under the Reduced Intensity Alternative all of the Specific Plan's objectives would be achieved but the majority would be met to a lesser extent as compared to the Specific Plan. For example, the reduction in development capacity under this alternative would not fully implement the ideas and plans presented in the Specific Plan, which include the integration of both new and rehabilitated residential development (Objective 1) and the long-term development and enhancement of the Century Villages at Cabrillo community (Objective 2). Although the Reduced Intensity Alternative would meet these goals, it would do so at a reduced capacity; therefore, leaving out much needed opportunities for additional housing and services for both the Century Villages at Cabrillo community and the homeless population of the Long Beach metropolitan area. This alternative could also meet Objectives 4, 6 and 7 relating to redevelopment of an antiquated building stock and available land, provision of housings and services near public transit, and enhancement of the continued fiscal health, viability, and success of the Century Villages at Cabrillo community, but to a lesser extent than the Specific Plan. The goal that would be equally met by the Reduced Intensity Alternative is Objective 3, enhanced living and connectivity.

## 7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative" and, in cases where the "No Project" Alternative is environmentally superior to the proposed project, an environmentally superior development alternative must be identified. Table 7-2 summarizes the impacts for the alternatives and how they compare to the Specific Plan.



## 7. Alternatives to the Proposed Project

**Table 7-2 Summary of Impacts of Alternatives Compared to the Specific Plan**

Topic	Specific Plan	No Project/ No Development	Reduced Intensity
Aesthetics	LTS	(+)	(=)
Air Quality	SU LTS	(-)*	(-)
Construction		(-)	(-)
Operation			
Cultural Resources	LTS	(-)	(=)
Energy	LTS	(-)	(-)
Geology and Soils	LTS	(-)	(=)
Paleontological Resources	LTS/M	(-)	(=)
Greenhouse Gas Emissions	SU	(-)*	(-)*
Hazards and Hazardous Materials	LTS/M	(-)	(=)
Hydrology and Water Quality	LTS	(+)	(-)
Land Use and Planning	LTS	(=)	(=)
Noise	SU LTS	(-)*	(-)
Construction		(-)	(-)
Operation			
Population and Housing	LTS	(=)	(=)
Public Services	LTS	(-)	(-)
Recreation	LTS	(+)	(=)
Transportation	LTS	(-)	(-)
Tribal Cultural Resources	LTS/M	(-)	(=)
Utilities and Service Systems	LTS	(-)	(-)

Notes: LTS: Less than Significant; LTS/M: Less than Significant with Mitigation Incorporated; SU: Significant and Unavoidable

(-) The alternative would result in less of an impact than the proposed Project.

(+) The alternative would result in greater impacts than the proposed Project.

(=) The alternative would result in the same/similar impacts as the proposed Project.

\* Indicates elimination of a significant and unavoidable impact.

The No Project/No Development Alternative is environmentally superior to the Specific Plan because it results in the elimination of the Specific Plan's three significant unavoidable adverse impacts: Air Quality (construction), GHG emissions, and Noise (construction). Since the environmentally superior alternative is a no project alternative, a development alternative was selected, as required by CEQA. One alternative has been identified as "environmentally superior" to the Specific Plan:

■ Reduced Intensity Alternative

The Reduced Intensity Alternative has been identified as the environmentally superior alternative. This alternative would reduce (but not eliminate) significant and unavoidable impacts associated with air quality, and noise compared to the Specific Plan. The Project's significant and unavoidable GHG impact would be eliminated under this alternative. Impacts related to aesthetics, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, population and housing, public services, recreation, transportation, and utilities and service systems would remain the same as or be slightly reduced compared to the Specific Plan, as demonstrated above, since this alternative would involve the same mix of land uses (although at a reduced intensity) and development area. This alternative would not increase impacts for any environmental topical area.

## 7. Alternatives to the Proposed Project

As demonstrated above and in Table 7-3, *Ability of Alternatives to Meet Project Objectives*, under the Reduced Intensity Alternative all of the Specific Plan's objectives would be achieved but the majority would be met to a lesser extent as compared to the Specific Plan. For example, the reduction in development capacity under this alternative would not fully implement the ideas and plans presented in the Specific Plan, which include the integration of both new and rehabilitated residential development (Objective 1), the long-term development and enhancement of the Century Villages at Cabrillo community (Objective 2), and development of enhanced and expanded open space and connectivity throughout the community (Objective 5). Although the Reduced Intensity Alternative would meet these goals, it would do so at a reduced capacity; therefore, leaving out much needed opportunities for additional housing and services for both the Century Villages at Cabrillo community and the homeless population of the Long Beach metropolitan area. This alternative could also meet Objectives 4, 6 and 7 relating to redevelopment of an antiquated building stock and available land, provision of housings and services near public transit, and enhancement of the continued fiscal health, viability, and success of the Century Villages at Cabrillo community, but to a lesser extent than the Specific Plan. The goal that would be equally met by the Reduced Intensity Alternative include Objective 3, enhanced living and connectivity.

However, the Reduced Intensity Alternative's ability to eliminate one of the three significant and unavoidable impacts that would result from the Project does not outweigh the benefit the Project provides at full buildout. As discussed in Section 9, *Significant Irreversible Changes Due to the Proposed Project*, California is in the midst of a long-term structural housing shortage and affordability crisis. The Legislature has declared a statewide housing crisis due to the shortage of available housing stock for all income levels, but especially for affordable housing. The lack of affordable housing also leads to other issues such as overcrowding and homelessness. The region in which the Specific Plan is proposed as one of the most hard hit by this crisis. In January 2020, over 66,000 people in Los Angeles County were experiencing homelessness, a nearly 13 percent increase from 2019 (LAO 2021). The Plan Area is an ideal location for the provision of affordable housing, and the Project Applicant has documented success in developing and operating communities where individuals and families thrive due to the opportunity of housing and security. Additionally, the Housing Element of the Long Beach General Plan consistently identified the Century Villages at Cabrillo Plan Area as an area to invest resources to expand and develop affordable housing and permanent supportive housing. The Specific Plan would be consistent with the City's Housing Element and support the need for more housing in the state. As such, the reduction in impacts related to GHG cannot prevent the Project's full potential to maximize achievement of its objectives.

**Table 7-3 Ability of Alternatives to Meet Project Objectives**

Project Objective	No Project/ No Development	Reduced Intensity
1. Integrate both new and rehabilitated residential development for the express purpose of providing transitional housing and support services to homeless veterans and the homeless population of the Long Beach metropolitan area.	Not Met	Partially Met
2. Allow for the long-term development and enhancement of the Century Villages at Cabrillo community to anchor residents, meet the evolving needs of the community and provide necessary support of resident's mental, physical, and emotional health.	Not Met	Partially Met
3. Enhance the safety, livability, and connectivity of the Century Villages at Cabrillo community.	Not Met	Met

## 7. Alternatives to the Proposed Project

**Table 7-3 Ability of Alternatives to Meet Project Objectives**

Project Objective	No Project/ No Development	Reduced Intensity
4. Guide redevelopment of an antiquated building stock and available land in order to accommodate increased demand for housing and services, while increasing energy efficiency.	Not Met	Partially Met
5. Develop enhanced and expanded open space and connectivity throughout the community to serve the needs of residents and employees.	Not Met	Met
6. Provide housings and services near the West Long Beach Transit Center and within a transit priority area consistent with Statewide and regional goals to reduce vehicle miles traveled.	Met	Partially Met
7. Enhance the continued fiscal health, viability, and success of the Century Villages at Cabrillo community.	Not Met	Partially Met

## 7.7 REFERENCES

California Council on Science and Technology (CCST). 2012, September. California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets.  
<http://www.ccst.us/publications/2012/2012ghg.pdf>.

Legislative Analyst's Office (LOA) 2021, January 21. California's Homelessness Challenges in Context.  
<https://lao.ca.gov/handouts/localgov/2021/Homelessness-Challenges-in-Context-012121.pdf>

## 7. Alternatives to the Proposed Project

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## 8. Impacts Found Not to Be Significant

PRC Section 21003 (f) states: "...it is the policy of the state that...[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." This policy is reflected in CEQA Guidelines Section 15126.2(a), which states that "[a]n EIR shall identify and focus on the significant environmental impacts of the proposed project" and Section 15143, which states that "[t]he EIR shall focus on the significant effects on the environment." CEQA Guidelines Section 15063(c) allows use of an Initial Study to document project effects that are less than significant. CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant, and were therefore not discussed in detail in the Draft EIR.

### 8.1 ASSESSMENT IN THE INITIAL STUDY

The Initial Study (Appendix A) prepared for the Century Villages at Cabrillo Specific Plan in January 2020 determined that there would be no impact or impacts would be less than significant for the environmental issues listed below. Consequently, they have not been further analyzed in this Draft EIR (DEIR). Please refer to Appendix A for an explanation of the basis of these conclusions. Impact categories and questions below are summarized directly from the CEQA Environmental Checklist, as contained in the Initial Study.

**Table 8-1 Impacts Found Not to Be Significant**

Environmental Issues	Initial Study Determination
<b>I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:</b>	
a) Have a substantial adverse effect on a scenic vista?	Less Than Significant
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact
<b>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) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</b>	
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?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact

## 8. Impacts Found Not to Be Significant

**Table 8-1 Impacts Found Not to Be Significant**

Environmental Issues	Initial Study Determination
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No Impact
<b>III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</b>	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant
<b>IV. BIOLOGICAL RESOURCES. Would the project:</b>	
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Less than Significant
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No Impact
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
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact
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
<b>V. CULTURAL RESOURCES. Would the project:</b>	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Less than Significant
<b>VII. GEOLOGY AND SOILS. Would the project:</b>	
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
iv) Landslides?	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	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
<b>IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:</b>	
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant

## 8. Impacts Found Not to Be Significant

**Table 8-1 Impacts Found Not to Be Significant**

Environmental Issues	Initial Study Determination
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less than Significant
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 for people residing or working in the project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than Significant
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No Impact
<b>X. HYDROLOGY AND WATER QUALITY. Would the project:</b>	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	
i) result in a substantial erosion or siltation on- or off-site;	Less than Significant
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Less than Significant
iv) impede or redirect flood flows?	Less than Significant
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less than Significant
<b>XI. LAND USE AND PLANNING. Would the project:</b>	
a) Physically divide an established community?	No Impact
<b>XII. MINERAL RESOURCES. Would the project:</b>	
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	No Impact
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
<b>XIII. NOISE. Would the project result in:</b>	
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
<b>XIV. POPULATION AND HOUSING. Would the project:</b>	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Less than Significant
<b>XVII. TRANSPORTATION. Would the project:</b>	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than Significant
d) Result in inadequate emergency access?	Less than Significant
<b>XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:</b>	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less than Significant
<b>XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</b>	
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact

## 8. Impacts Found Not to Be Significant

**Table 8-1            Impacts Found Not to Be Significant**

Environmental Issues	Initial Study Determination
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?	No Impact
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?	No Impact
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



## 9. Significant Irreversible Changes Due to the Proposed Project

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Section 15126.2(c) of the CEQA Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Specifically, the CEQA Guidelines state:

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

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed irretrievable commitments of nonrenewable resources is not justified (e.g., the project involves the wasteful use of energy).

In the case of the Century Village at Cabrillo Specific Plan (Specific Plan), its implementation would involve a land use, development, and implementation framework to support 1,380 dwelling units, 79,350 square feet of amenities, 15,000 square feet of educational uses, 22,850 square feet of commercial/retail uses, and 67,050 square feet of administrative and supportive services. Significant irreversible changes that would be caused by the Specific Plan if it is implemented would be:

- Construction activities that would entail the commitment of nonrenewable and/or slowly renewable energy resources; human resources; and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels.
- Operation activities that would require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The commitment of resources required for operation of development accommodated by

## 9. Significant Irreversible Changes Due to the Proposed Project

the Specific Plan would limit the availability of such resources for future generations or for other uses during the life of the project.

- Increased traffic on area roadways (see Section 5.14, *Transportation*).
  - Emissions of air pollutants associated with operation (see Section, 5.2, *Air Quality*).
  - Consumption of non-renewable energy associated with operation of the Specific Plan due to the use of automobiles, lighting, heating and cooling systems, and appliances (see Section 5.6, *Greenhouse Gas Emissions*, of this DEIR).
- An increased commitment of social services and public maintenance services (e.g., police, fire, schools, libraries, and sewer and water services) would also be required. The social service commitments would be long-term obligations in view of the low likelihood of returning the land to its original condition once it has been developed (see Sections 5.12, *Public Services*, and 5.16, *Utilities and Service Systems*).
  - Population and employment growth related to project implementation would increase vehicle trips over the long term. Emissions associated with such vehicle trips would continue to contribute to the South Coast Air Basin's nonattainment designation for ozone and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), nonattainment for lead (Los Angeles County only) under the California and National Ambient Air Quality Standards (AAQS), and nonattainment for nitrogen dioxide (NO<sub>2</sub>) under the California AAQS (see Sections 5.2, *Air Quality*, and 5.6, *Greenhouse Gas Emissions*).

Given the low likelihood that the land of the Plan Area would revert to lower intensity uses or to its current form, the Specific Plan would generally commit future generations to these environmental changes. The commitment of resources due to the Specific Plan is not unusual or inconsistent with projects of this type and scope. However, once these commitments are made, it is improbable that the Plan Area would revert back to its current condition. Therefore, the Specific Plan would result in significant irreversible changes to the environment throughout the lifespan of development that would be accommodated by the Specific Plan.

### Urban Design

As discussed in Chapter 3, *Project Description*, the Specific Plan is based on urban design strategies and guiding principles that cumulatively represent the community's vision for the future. These strategies and principles include:

#### *Strategies*

- Strengthen Linkages
  - Standardize streets and sidewalks along San Gabriel, Williams, and River.
  - Extend activity promenades [fire lanes] north of William.
  - Connect street, bicycle, and walkway network to adjacent infrastructure.
  - Extend transit onto CVC with a new transit center as the anchor.

## 9. Significant Irreversible Changes Due to the Proposed Project

- **Expand Hierarchy**
  - Strengthen CVC's orientation by realigning the main axis.
  - Develop hierarchy of public, semi-public, and private open spaces.
  - Reinforce building frontages on streets, promenades, and open spaces.
  - Organize monuments, open spaces, and civic uses for strong visual relationships.
- **Improve Efficiencies**
  - Consolidate parking into efficient parking structures.
  - Establish block structure with developable footprints.
  - Develop buildings and landscape with multiple functions and programming.
  - Increase building heights and massing where they can form positive spaces.
- **Productive Landscape**
  - Re-locate sensitive uses for the greatest benefit to user health and wellness.
  - Locate amenities and open spaces responsive to local populations and uses.
  - Expand spiritually and emotionally regenerative landscapes and gardens.
  - Develop infrastructure for sustainable water management and energy conservation/production.

### *Guiding Principles*

- **Shelter + Home:** Holistically assemble services, amenities, and housing anchor our residents in home within our community.
- **Health + Wellbeing:** Support residents' mental, physical, and emotional health by enhancing the safety, livability and connectivity of our community.
- **Financial Sustainability:** Enhance the continued fiscal health, viability, and success of our special community.
- **Respect + Representation:** Embrace residents and stakeholders with shared values and respect to collaboratively serve the interests and needs of our diverse community
- **Environmental Sustainability:** Serve as a responsible steward and adapt the built and natural environments of the community for climate change while molding it into an environmentally restorative and productive system.
- **Evolve + Share:** Evolve the community to serve the changing needs of clients and city while serving as an example for other communities.

### **Sustainability**

Additionally, development projects accommodated by the Specific Plan would be designed using applicable green building practices, including those of the most current Building Energy Efficiency Standards (Title 24,

## 9. Significant Irreversible Changes Due to the Proposed Project

California Code of Regulations, Part 6) and California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11). Furthermore, the development standards and design guidelines included in the Specific Plan are based on the LEED-ND certification documentation obtained by CVC in 2019, with previous phases and new phases of development to be similarly certified for LEED by the U.S. Green Building Council. To achieve LEED certification, some of the green building standards that would be implemented by the Specific Plan include:

- Rebuild streets and a new wellness trail network will form a system of green infrastructure throughout the Plan Area for everything from sustainable storm water management to renewable energy production.
- Streets will be bound by a mix of bioswales, rain gardens and detention basins along with other permeable surfaces including parkways, decomposed granite, and paver systems.
- The wellness trail network and sidewalks will include preservation, replanting and expanding the tree canopy with climate-appropriate species that retain rainwater, provide habitat for local wildlife, and reduce the local heat island and air pollution effects.
- Streetlights will include solar panels and batteries to generate and capture electricity to be later used in the evening to light the way for pedestrians and vehicles.

### Consistency with SB 375, SB 743, and Regional RTP/SCS

The Specific Plan is located within a High Quality Transit Area (HQTA) as defined by SCAG and a Transit Priority Area (TPA) as defined by SB 743, which supports transit opportunities and promotes a walkable environment. In addition, SB 375, the Sustainable Communities and Climate Protection Act of 2008, was adopted by the legislature to reduce per capita vehicle miles traveled and associated GHG emissions from passenger vehicles. The Plan Area is highly connected and provides accessibility for persons who choose not to drive or do not have access to a vehicle. Additionally, the Specific Plan promotes pedestrian activity and bicycling activity by providing opportunities for active transportation through the implementation of new secure bicycle parking and bike paths incorporated into the wellness trail network, additional bike facilities, and a network of wellness trails to encourage walking jogging, and biking. The Specific Plan would be consisted with State and regional goals to reduce vehicle miles travel by placing housing and services in close proximity to transit and promoting active transportation opportunities. Consistency with applicable SCAG RTP/SCS goals as discussed in Tables 5.9-2 and 5.9-3 in Section 5.9, *Land Use and Planning*.

### Need for Housing

California is in the midst of a long-term structural housing shortage and affordability crisis. High demand of housing along with shortages in supply lead to the increase in rental and home prices throughout the state. The lack of affordable housing also leads to other issues such as overcrowding and homelessness. Therefore, there is a need for more affordable housing and transitional and supportive housing for combat homelessness. Buildout of the Plan Area under the Specific Plan will result in a total of 1,380 dwelling units, 79,350 square feet of amenities, 15,000 square feet of educational uses, 22,850 square feet of commercial/retail uses, and 67,050 square feet of administrative and supportive services. Additionally, the Housing Element of the Long

## 9. Significant Irreversible Changes Due to the Proposed Project

Beach General Plan consistently identified the Century Villages at Cabrillo Plan Area as an area to invest resources to expand and develop affordable housing and permanent supportive housing. The Specific Plan would be consistent with the City's Housing Element and support the need for more housing in the state. Refer to Sections 5.9, *Land Use and Planning* and 5.11, *Population and Housing*.

## 9. Significant Irreversible Changes Due to the Proposed Project

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## 10. Growth-Inducing Impacts of the Proposed Project

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Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects were examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which the Century Villages at Cabrillo Specific Plan (Specific Plan) could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this DEIR.

Also note, pursuant to Public Resources Code Section 21159.28, if a residential or mixed-use residential project is consistent with the use designation, density, building intensity, and applicable policies specified for the project area in the applicable sustainable communities strategy, such a project's EIR need not reference, describe, or discuss growth-inducing impacts. The Project is a predominantly residential mixed-use development, and as described in Section 5.9, *Land Use and Planning*, development under the Specific Plan would be consistent with SCAG's RTP/SCS. Thus, the following is provided for informational purposes.

## 10. Growth-Inducing Impacts of the Proposed Project

### **Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?**

The elimination of a physical obstacle to growth, such as the construction or extension of major infrastructure facilities that are not presently in the area, would be considered to be a growth-inducing impact. The growth-inducing potential of a project would also be considered significant if it fosters growth in excess of what is assumed in the local master plans and land use plans, or in projections made by regional planning agencies.

The Specific Plan would direct growth in an area of the City that is almost entirely built out with urban land uses. The Plan Area and its surroundings are currently well served by infrastructure facilities, including roadways. Some minor extensions or improvements of utility facilities from surrounding roadways, including water and sewer lines, may be required for future development. However, development accommodated by the Specific Plan does not plan or require the construction or extension of major infrastructure facilities that are not currently present in and around the Plan Area. Therefore, the Specific Plan would not remove obstacles to growth through the construction or extension of major infrastructure facilities that do not presently exist in the project area.

### **Would this project result in the need to expand one or more public services to maintain desired levels of service?**

As discussed in Section 5.12, *Public Services*, none of the public service agencies consulted during the preparation of this DEIR indicated that the Specific Plan would necessitate expansion of their existing resources or facilities in order to maintain desired levels of service. Additionally, as discussed in Section 5.12, development accommodated by the Specific Plan would be required to pay public facility impact fees that are allocated to police and fire services and facilities. Funding for police and fire services and facilities would also come from Proposition H revenue; the City's General Fund; and other revenue sources such as paramedic fees, fire building plan and building checks, various state and federal grants, and private donations. The Specific Plan would not, therefore, have significant growth-inducing consequences with respect to public services.

### **Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?**

During the construction of development projects accommodated by the Specific Plan, a number of design, engineering, service, and construction-related jobs would be created. However, construction-related jobs would not result in a significant population increase because they would be filled by workers in the region and the construction phase would be temporary. Additionally, the Specific Plan's construction phases would not result in a long-term increase in employment from short-term construction activities.

As discussed in Section 5.11, *Population and Housing*, implementation of the Specific Plan would result in the creation of up to 44 new long-term jobs and 2,100 residents. As the population grows and occupies new dwelling units in the Plan Area, these residents would seek shopping, entertainment, and other economic



## 10. Growth-Inducing Impacts of the Proposed Project

opportunities in the surrounding area. This would facilitate economic goods and services and could, therefore, encourage the creation of new businesses and/or the expansion of existing businesses to address these economic needs.

The Specific Plan is consistent with the City's General Plan and land use assumptions. Employment growth resulting from Specific Plan implementation is within estimated employment growth in Long Beach, and thus would not result in an adverse impact. Additionally, some of the jobs are expected to be filled by the local workforce. Further, although the Specific Plan would result in new permanent employment opportunities and stimulate economic activity in the City, it would meet future employment demands anticipated in SCAG's regional growth projections for the City. Therefore, the Specific Plan would not encourage or facilitate economic effects that could significantly affect the environment.

### **Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?**

The proposed project consists of adoption of the Specific Plan and an amendment to the Long Beach Zoning Ordinance and Zoning Map to allow for redevelopment over the next 20 years of portions of the Plan Area that consists of the former navy housing stock, transitioning the collection of antiquated structures and underutilized areas to modern affordable housing and service facilities along with key site improvements. Approval of the Specific Plan and associated zoning ordinance and map amendments would not involve a precedent-setting action that could be applied to other properties and thereby encourage or facilitate growth that would not otherwise occur.

Specific plans are routinely approved by cities and counties in California. A specific plan is a policy and/or regulatory tool authorized by state legislation that local governments use to systematically implement their general plan and guide development in a localized area. While the general plan is the overall guide for growth and development in a community, a specific plan is able to focus on the unique characteristics of a designated area by customizing the planning process and land use regulations to that area. The Specific Plan would focus development within the Plan Area, which is fully developed and in a highly urbanized area of the City. Notably, the Specific Plan is consistent with the City's General Plan and land use assumptions.

Additionally, implementation of the Specific Plan would further encourage the creation of a walkable community with direct access to alternative modes of transportation, which in turn would reduce dependency on cars for mobility. In this regard, the Specific Plan is precedent setting; its implementation would continue to create a community that is more compact and pedestrian friendly consistent with State, regional, and local goals and policies. Because reducing vehicle miles traveled per service population and per-capita generation of greenhouse gas emissions would be beneficial to the region, this does not represent an adverse impact.

## 10. Growth-Inducing Impacts of the Proposed Project

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# 11. Organizations and Persons Consulted

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## **City of Long Beach**

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## **Long Beach Fire Department**

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## **Long Beach Police Department**

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## **Long Beach Unified School District**

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